HITACHI

PA **No. 0116**

36UX59B 32UX59B
36FX49B 32FX49B
36CX39B 32CX39B

NTSC **M9LXU Chassis**

R/C: CLU-4111UI
R/C: CLU-4111U

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CAUTION: Before servicing this chassis, it is important that the service technician read the "Product Safety Notices" in this service manual.

SAFETY NOTICE

USE ISOLATION TRANSFORMER WHEN SERVICING

Components having special safety characteristics are identified by a ⚠ on the parts list in this Service Data and its supplements and bulletins. Before servicing the chassis, it is important that the service technician read and follow the "Safety Precautions" and "Product Safety Notices" in this Service Manual.

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT

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SAFETY PRECAUTIONS

NOTICE: Comply with all cautions and safety-related notes located on or inside the cabinet and on the chassis or picture tube.

WARNING: Since the chassis of this receiver is connected to one side of the AC power supply during operation, whenever the receiver is plugged in, service should not be attempted by anyone unfamiliar with the precautions necessary when working on this type of receiver.

The following precautions should be observed:

1. Do not install, remove, or handle the picture tube in any manner unless shatterproof goggles are worn. People not so equipped should be kept away from the picture tube while handling.

2. When service is required, an isolation transformer should be inserted between power line and the receiver before any service is performed on a "HOT" chassis receiver.

3. When replacing a chassis in the receiver, all the protective devices must be put back in place, such as barriers, nonmetallic knobs, adjustment and compartment cover-shields, isolation resistors, capacitors, etc.

4. When service is required, observe the original lead dress in the high voltage circuitry area.

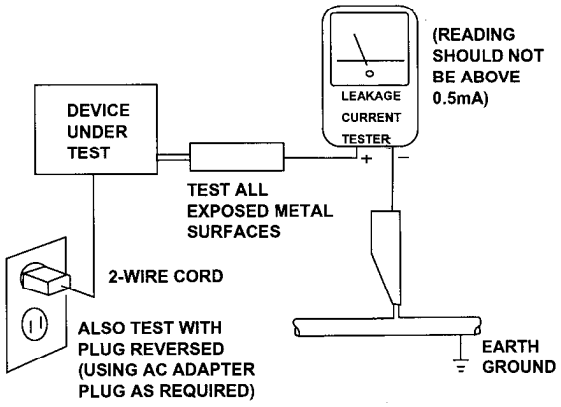
5. Always use the manufacturer's replacement components. Critical components as indicated on the circuit diagram should not be replaced by another manufacturer's. Furthermore, where a short circuit has occurred, replace those components that indicate evidence of overheating.

6. Before returning a serviced receiver to the customer, the service technician must thoroughly test the unit to be certain that it is completely safe to operate without danger of electrical shock, and be sure that no protective device built into the receiver by the manufacturer has become defective, or inadvertently defeated during servicing.

Therefore, the following checks should be performed for the continued protection of the customer and service technician.

Leakage Current Cold Check
With the AC plug removed from the 120V AC 60Hz source, place a jumper across the two plug prongs. Using an insulation tester (DC500V), connect one lead to the jumpered AC plug and touch the other lead to each exposed metal part (antennas, screwheads, metal overlays, control shafts, etc.), particularly any exposed metal part having a return path to the chassis should have a minimum resistor reading of 0.24MΩ and a maximum resistor reading of 12MΩ. Any resistance value below or above this range indicates an abnormality which requires corrective action. An exposed metal part having a return path to the chassis will indicate an open circuit.

Leakage Current Hot Check
Plug the AC line cord directly into a 120V AC 60Hz outlet (do not use an isolated transformer for this check). Turn the AC power ON. Using a Leakage Current Tester (Simpson's Model 229 or equivalent), measure for current from all exposed metal parts of the cabinet (antennas, screwheads, overlays, control shafts, etc.) particularly any exposed metal part having a return path to the chassis or to a known earth ground (water pipe, conduit, etc.). Any current measured must not exceed 0.5 milliamps.



AC LEAKAGE TEST

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE RECEIVER TO THE CUSTOMER.

High Voltage
This receiver is provided with a hold down circuit for clearly indicating that voltage has increased in excess of a predetermined value. Comply with all notes described in this service manual regarding this hold down circuit when servicing, so that this hold down circuit is operated correctly.

Serviceman Warning
With minimum BRIGHTNESS and CONTRAST, the operating high voltage in this receiver is lower than 34.0kV(36V), 34.0kV(32V). In case any component having influence on the high voltage is replaced, confirm that high voltage with minimum BRIGHTNESS and CONTRAST is lower than 34.0kV(36V), 34.0kV(32V). To measure high voltage use a High Impedance High Voltage meter. Connect (-) to chassis earth and (+) to the CRT Anode button. (See the following connection diagram.)

Note: Turn power switch OFF without fail before the connection to the Anode button is made.

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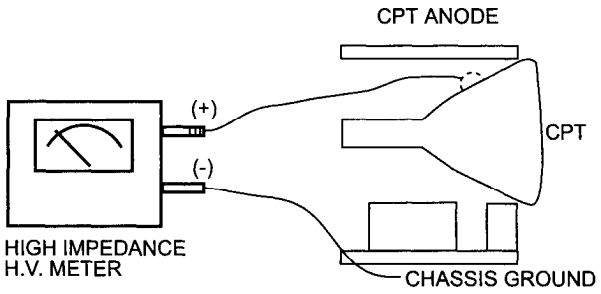
PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in HITACHI television receivers have special safety-related characteristics. These are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified with an ⚠ mark in the schematics and parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the HITACHI-recommended replacement component, shown in the parts list in this Service Manual, may create shock, fire, X-radiation, or other hazards.

Production safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current HITACHI Service Manual. A subscription to, or additional copies of HITACHI Service Manuals may be obtained at a nominal charge from HITACHI Sales Corporation.



X-Radiation

TUBE: The primary source of X-Radiation in this receiver is the picture tube. The tube utilized in this chassis is specially constructed to limit X-Radiation emissions. For continued X-Radiation protection, the replacement tube must be the same type as the original HITACHI-approved type.

When troubleshooting and making test measurements in a receiver with an excessive high voltage problem, avoid being unnecessarily close to the picture tube and the high voltage component.

Do not operate the chassis longer than is necessary to locate the cause of excessive voltage.

This Service Manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual. Improperly performed repairs can adversely affect the safety and reliability of the product and may void warranty. Consumers should not risk trying to do the necessary repairs and should refer to a qualified service technician.

WARNING
Lead in solder used in this product is listed by the California Health and Welfare agency as a known reproductive toxicant which may cause birth defects or other reproductive harm (California Health and Safety Code, Section 25249.5).

When servicing or handling circuit boards and other components which contain lead in solder, avoid unprotected skin contact with solder. Also, when soldering do not inhale any smoke or fumes produced.

SAFETY NOTICE
USE ISOLATION TRANSFORMER
WHEN SERVICING

Components having special safety characteristics identified by⚠ on the parts list in this service manual and its supplements and bulletins. Before servicing this product, it is important that the service technician read and follow the "Safety Precautions" and the "Product Safety Notices" in this Service Manual.

For continued X-Radiation protection, replace picture tube with original type or HITACHI equivalent type.

POWER SOURCE

This television receiver is designed to operate on 120 Volts/60Hz, AC house current. Insert the power cord into a 120 Volts/60Hz outlet.

NEVER CONNECT THE TV TO OTHER THAN THE SPECIFIED VOLTAGE OR TO DIRECT CURRENT.

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SERVICING PRECAUTIONS

CAUTION: Before servicing instruments covered by this service data and its supplements and addenda, read and follow the SAFETY PRECAUTIONS on page 3 of this publication.
NOTE: If unforseen circumstances create conflict between the following servicing precautions and any of the safety precautions on page 3 of this publication, always follow the safety precautions. Remember: Safety First.

General Servicing Guidelines

1. Always unplug the instrument AC power cord from the AC power source before:
   a. Removing or reinstalling any component, circuit board, module, or any other instrument assembly.
   b. Disconnecting or reconnecting any instrument electrical plug or other electrical connection.
   c. Connecting a test substitute in parallel with an electrolytic capacitor in the instrument.
      CAUTION: A wrong part substitution or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.
   d. Discharging the picture tube anode.
2. Test high voltage only by measuring it wih an appropriate high voltage meter or other voltage measuring device (DVM, FETVOM, etc.) equipped with a suitable high voltage probe. Do not test high voltage by "drawing an arc."
3. Discharge the picture tube's anode by (a) first connecting one end of an insulated clip lead to the degaussing or kine aquadag grounding system shield at the point where the picture tube socket ground lead is connected, and then (b) touch the other end of the insulated clip lead to the picture tube high voltage output, using an insulated handle to avoid personal contact with high voltage.
4. Do not spray chemicals on or near this instrument or any of its assemblies.
5. Unless specified otherwise in these service data, clean electrical contacts by applying the following mixture to the contacts with a pipe cleaner, cotton-tipped stick or comparable nonabrasive applicator: 10% (by volume) Acetone and 90% (by volume) ispropyle alchohol (90%-99% strength).
   CAUTION: This is a flammable mixture. Unless specified otherwise in these service data, lubrication of contacts is not required.
6. Do not defeat any plug/socket B+ voltage interlocks with which instruments covered by this service data might be equipped.
7. Do not apply AC power to this instrument and/or any of its electrical assemblies unless all solid-state device heat-sinks are correctly installed.
8. Always connect the test instrument ground lead to the appropriate instrument chassis ground before connecting the test instrument positive lead. Always remove the test instrument ground lead last.
9. Use with this instrument only the test fixtures specified in this service data.
   CAUTION: Do not connect the test fixture ground strap to any heatsink in this instrument.

Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge build-up or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or desolder ES devices.
4. Use only an anti-static type solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ES device.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material.)
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
   CAUTION: Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

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General Soldering Guidelines

1. Use a grounded-tip, low-wattage soldering iron and appropriate tip size and shape that will maintain tip temperature within the range 500°F to 600°F.

2. Use an appropriate gauge of resin-core solder composed of 60 parts tin/40 parts lead.

3. Keep the soldering iron tip clean and well-tinned.

4. Thoroughly clean the surfaces to be soldered. Use a small wire-bristle (0.5 inch or 1.25 cm) brush with a metal handle. Do not use freon-propelled spray-on cleaners.

5. Use the following desoldering technique.
   a. Allow the soldering iron tip to reach normal temperature (500°F to 600°F).

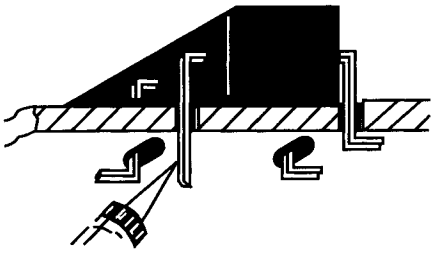
   b. Heat the component lead until the solder melts. Quickly draw away the melted solder with an anti-static, suction-type solder removal device or with solder braid.
   CAUTION: Work quickly to avoid overheating the circuit board printed foil.

6. Use the following soldering technique.
   a. Allow the sodering iron tip to reach normal temperature (500°F to 600°F).

   b. First, hold the soldering iron tip and solder strand against the component lead until the solder melts.

   c. Quickly move the soldering iron tip to the junction of the component lead and the printed circuit foil, and hold it there only until the solder flows onto and around both the component lead and the foil.
   CAUTION: Work quickly to avoid overheating the circuit board printed foil or components.

   d. Closely inspect the solder area and remove any excess or splashed solder with a small wire-bristle brush.



Use Solding Iron to Pry Leads

IC Removal/Replacement

Some Hitachi unitized chassis circuit boards have slotted holes (oblong) through which the IC leads are inserted and then bent flat against the circuit foil. When holes are the slotted type, the following technique should be used to remove and replace the IC. When working with boards using the familiar round hole, use the standard technique as outlined in paragraphs 5 and 6 above.

Removal

1. Desolder and straighten each IC lead in one operation by gently prying up on the lead with the soldering iron tip as the solder melts.

2. Draw away the melted solder with an anti-static suction-type solder removal device (or with solder braid) before removing the IC.

Replacement

1. Carefully insert the replacement IC in the circuit board.

2. Carefully bend each IC lead against the circuit foil pad and solder it.

3. Clean the soldered areas with a small wire-bristle brush. (It is not necessary to reapply acrylic coating to areas.)

"Small-signal" Discrete Transistor Removal/Replacement

1. Remove the defective transistor by clipping its leads as close as possible to the component body.

2. Bend into a "U" shape the end of each of three leads remaining on the circuit board.

3. Bend into a "U" shape the replacement transistor leads.

4. Connect to replacement transistor leads to the corresponding leads extending from the circuit board and crimp the "U" with long nose pliers to insure metal to metal contact, then solder each connection.

Power Output Transistor Devices Removal/Replacement

1. Heat and remove all solder from around the transistor leads.

2. Remove the heatsink mounting screw (if so equipped).

3. Carefully remove the transistor from the circuit board.

4. Insert new transistor in circuit board.

5. Solder each transistor lead, and clip off excess lead.

6. Replace heatsink.

Diode Removal/Replacement

1. Remove defective diode by clipping its leads as close as possilbe to diode body.

2. Bend the two remaining leads perpendicularly to the circuit board.

3. Observing diode polarity, wrap each lead of the new diode around the corresponding lead on the circuit board.

4. Securely crimp each connection and solder it.

5. Inspect (on the circuit board copper side) the solder joints of the two "original leads". If they are not shiny, reheat them and, if necessary, apply additional solder.

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Fuses and conventional Resistor Removal/Replacement

1. Clip each fuse or resistor lead at top of circuit board hollow stake.

2. Securely crimp leads of replacement component around stake 1/8 inch from top.

3. Solder the connections.
   CAUTION: Maintain original spacing between the replaced component and adjacent components and the circuit board, to prevent excessive component temperatures.

Circuit Board Foil Repair

Excessive heat applied to the copper foil of any printed circuit board will weaken the adhesive that bonds the foil to the circuit board, causing the foil to separate from, or "lift-off" the board. The following guidelines and procedures should be followed whenever this condition is encountered.

In Critical Copper Pattern Areas

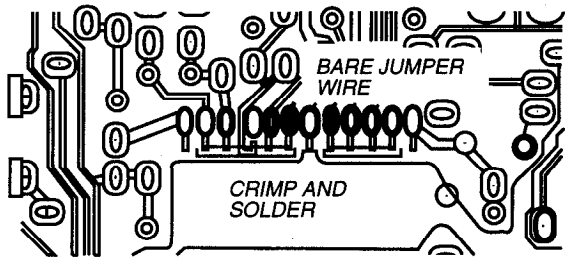
High component/copper pattern density and/or special voltage/current characteristics make the spacing and integrity of copper pattern in some circuit board areas more critical than in others. The circuit foil in these area is designated as Critical Copper Pattern. Because Critical Copper Pattern requires special soldering techniques to ensure the maintenance of reliability and safety standards, contact your Hitachi personnel.

At IC Connections

To repair defective copper pattern at IC connections, use the following procedure to install a jumper wire on the copper pattern side of the circuit board. (Use this technique only on IC connections.)

1. Carefully remove the damaged copper pattern with a sharp knife. (Remove only as much copper as absolutely necessary.)

2. Carefully scratch away the solder resist and acrylic coating (if used) from the end of the remaining copper pattern.



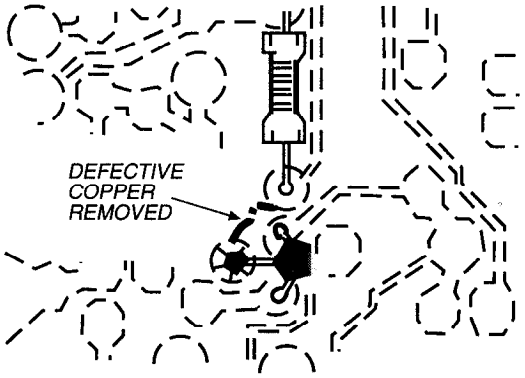
Install Jumper Wire and Solder

3. Bend a small "U" in one end of a small-gauge jumper wire and carefully crimp it around the IC pin. Solder the IC connection.

4. Route the jumper wire along the path of the cut-away copper pattern and let it overlap the previously scraped end of the good copper pattern. Solder the overlapped area, and clip off any excess jumper wire.

At Other Connections

Use the following technique to repair defective copper pattern at connections other than IC Pins. This technique involves the installation of a jumper wire on the component side of the circuit board.



Insulated Jumper Wire

1. Remove the defective copper pattern with a sharp knife. Remove at least 1/4 inch of copper, to ensure hazardous condition will not exist if the jumper wire opens.

2. Trace along the copper pattern from both wire sides of the pattern break and locate the nearest component directly connected to the affected copper pattern.

3. Connect insulated 20-gauge jumper wire from the nearest component on one side of the pattern break to the lead of the nearest component on the other side. Carefully crimp and solder the connections.
   CAUTION: Be sure the insulated jumper wire is dressed so that it does not touch components or sharp edges.

Frequency Synthesis (FS) Tuning Systems

1. Always unplug the instrument AC power cord before disconnecting or reconnecting FS tuning system cables and before removing or inserting FS tuning system modules.

2. The FS tuner must never be disconnected from the FS tuning control module while the power is applied to the instrument.

3. When troubleshooting intermittent problems that might be caused by defective cable connection(s) to the FS tuning system, remove the instrument AC power as soon as the defective connector is found and finish confirming the bad connection with a continuity test. This procedure will reduce the probability of electrical overstress of the FS system semi-conductor components.

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NOTE: ***These components are affixed with glue. Be careful not to break or damage any foil under the component or at the pins of the ICs when removing. Usually applying heat to the component for a short time while twisting with tweezers will break the component loose.***

Leadless Chip Components (surface mount)

Chip components must be replaced with identical chips due to critical foil track spacing. There are no holes in the board to mount standard transistors or diodes. Some chip capacitor or resistor board solder pads may have holes through the board, however the hole diameter limits standard resistor replacement to 1/8 watt. Standard capacitors may also be limited for the same reason. It is recommended that identical chip components be used.

Chip resistors have a three digit numerical resistance code -1st and 2nd significant digits and a multiplier. Example: 162 = 1600 or 1.6KΩ resistor, 0 = 0Ω (jumper).

Chip capacitors generally do not have the value indicated on the capacitor. The color of the component indicates the general range of the capacitance.

Chip transistors are identified by a two letter code. The first letter indicates the type and the second letter, the grade of transistor.

Chip diodes have a two letter identification code as per the code chart and are a dual diode pack with either common anode or common cathode. Check the parts list for correct diode number.

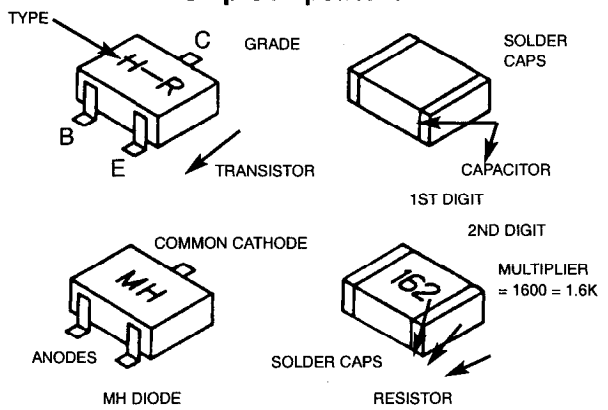
Component Removal

1. Use solder wick to remove solder from component end caps or terminals.
2. Without pulling up, carefully twist the component with tweezers to break the adhesive.
3. Do not reuse removed leadless or chip components since they are subject to stress fracture during removal.

Chip Component Installation

1. Put a small amount of solder on the board soldering pads.
2. Hold the chip component against the soldering pads with tweezers or with a miniature alligator clip and apply heat to the pad area with a 30 watt iron until solder flows. Do not apply heat for more than 3 seconds.

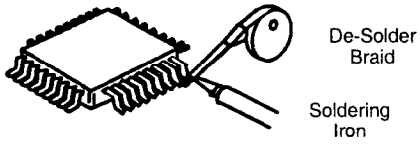
Chip Components



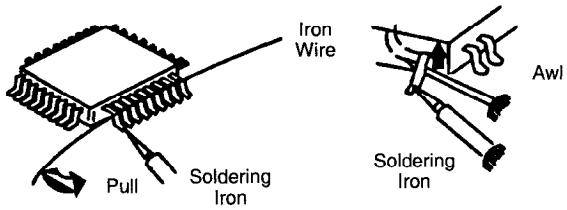
How to Replace Flat-IC —Required Tools—

- Soldering iron
- De-solder braids
- iron wire or small awl
- Magnifier

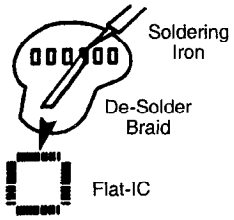
1. Remove the solder from all of the pins of a Flat-IC by using a de-solder braid.



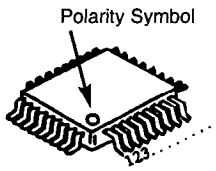
2. Put the iron wire under the pins of the Flat-IC and pull it in the direction indicated while heating the pins using a soldering iron. A small awl can be used instead of the iron wire.



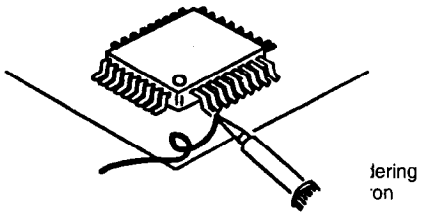
3. Remove the solder from all of the pads of the Flat-IC by using a de-solder braid.



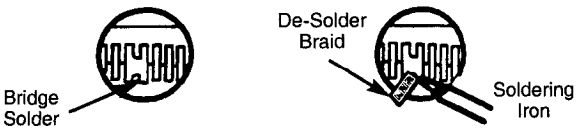
4. Position the new Flat-IC in place (apply the pins of the Flat-IC to the soldering pads where the pins need to be soldered). Properly determine the positions of the soldering pads and pins by correctly aligning the polarity symbol.



5. Solder all pins to the soldering pads using a fine tipped soldering iron.



6. Check with a magnifier for solder bridge between the pins or for dry joint between pins and soldering pads. To remove a solder bridge, use a de-solder braid as shown in the figure below.



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TECHNICAL SPECIFICATIONS

POWER RATINGS

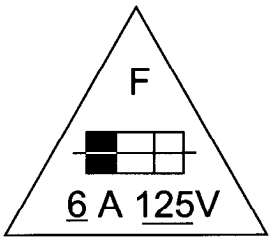
36UX59B/CZ97 . . . . . .171 Max. Watts
32UX59B/CY97 . . . . . .167 Max. Watts
36FX49B/CZ95 . . . . . .166 Max. Watts
32FX49B/CY95 . . . . . .156 Max. Watts
36CX39B/CZ93 . . . . . .161 Max. Watts
32CX39B/CY93 . . . . . .151 Max. Watts

COLOR PICTURE TUBE

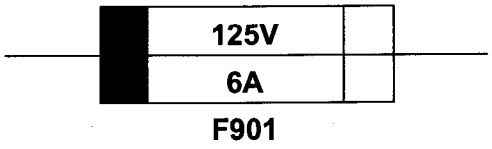
36UX59B/CZ97 . . . . . .A90LPY30X01
32UX59B/CY97 . . . . . .A80LJF30X(W)
36FX49B/CZ95 . . . . . .A90LPY30X01
32FX49B/CY95 . . . . . .A80LJF30X(W)
36CX39B/CZ93 . . . . . .A90LPY30X01
32CX39B/CY93 . . . . . .A80LJF30X(W)

CAUTION: Below is an EXAMPLE only. See Replacement Parts List for details. The following symbol near the fuse indicates fast operating fuse (to be replaced). Fuse ratings appear within the symbol.

Example:



"RISK OF FIRE - REPLACE FUSE AS MARKED"



The rating of fuse F901 is 6.0A-125V.
Replace with the same type fuse for continued protection against fire.

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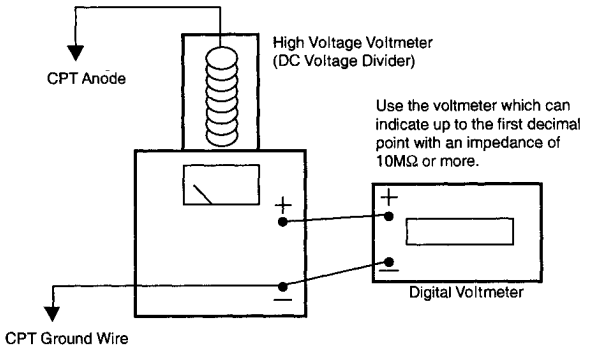
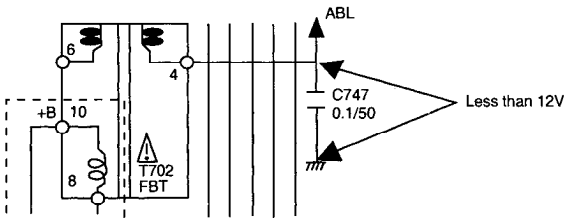
TECHNICAL CAUTIONS

High Voltage Limiter Circuit Operation Check and Overvoltage Protection Circuit Operation Check

Adjustment Preparation

1. Connect a High Voltage Voltmeter between CPT Anode terminal (Anode capside) and Ground.
2. Set the AC input voltage to 120±3V.
3. Receive Circle Pattern or Broadcast Signal and set "BRIGHTNESS" and "CONTRAST" to maximum. Adjust the SCREEN VR so that Beam Current is IB±0.1mA. (The voltage at ABL terminal (C747) should be 12V or less.)

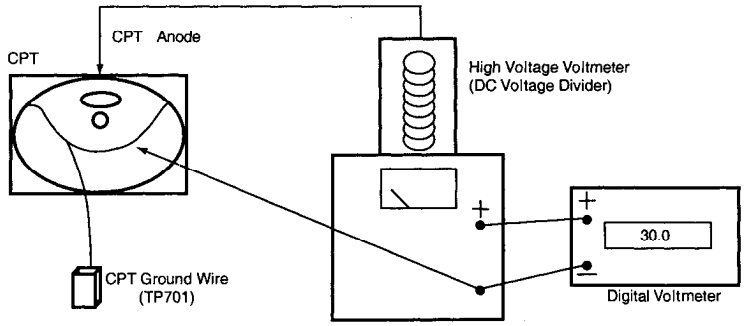

CPT Anode
High Voltage Voltmeter
(DC Voltage Divider)
Use the voltmeter which can indicate up to the first decimal point with an impedance of 10MΩ or more.
Digital Voltmeter
CPT Ground Wire



Adjustment Procedure

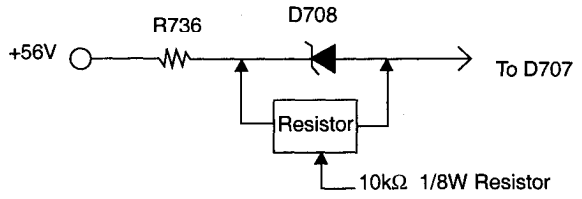
1. Check that the normal High Voltage and +B Voltage as below.

CHASSIS	EHT±1kV	IB±0.1mA	+B
CZ97,CZ95, CZ93	30.0kV	1.7mA	140±0.3V
CY97,CY95, CY93	29.0kV	1.5mA	140±0.3V



Use the voltmeter impedance 10MΩ or more with indication to the first decimal place.

2. Connect a 10KΩ 1/8W resistor to both ends of D708 and check that power is turned off.



3. Disconnect the AC plug and remove the 10kΩ resistor.

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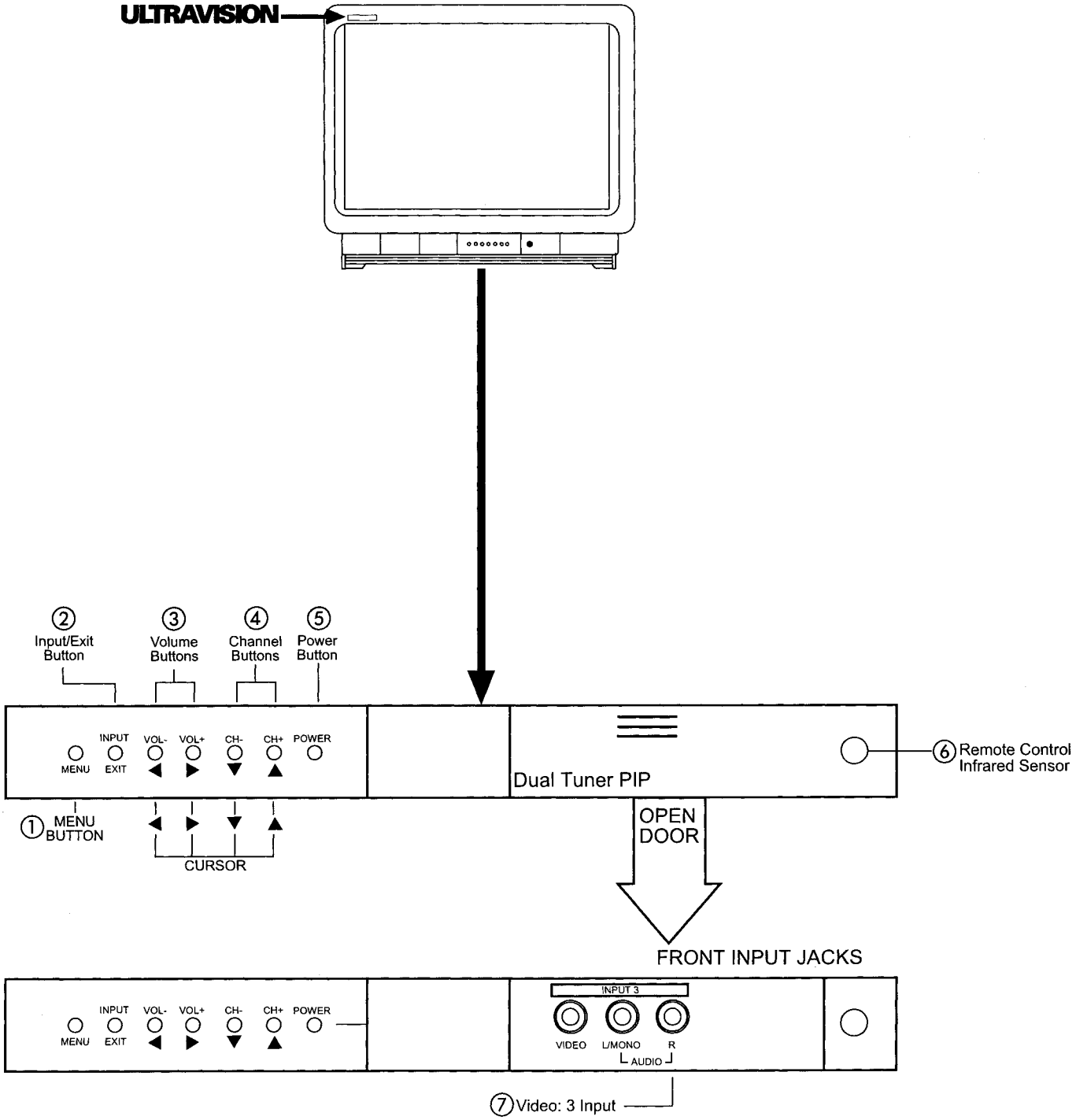
FRONT PANEL CONTROLS FOR 32UX59B AND 36UX59B

FRONT VIEW



A detailed explanation of the circled numbers is on page 15.

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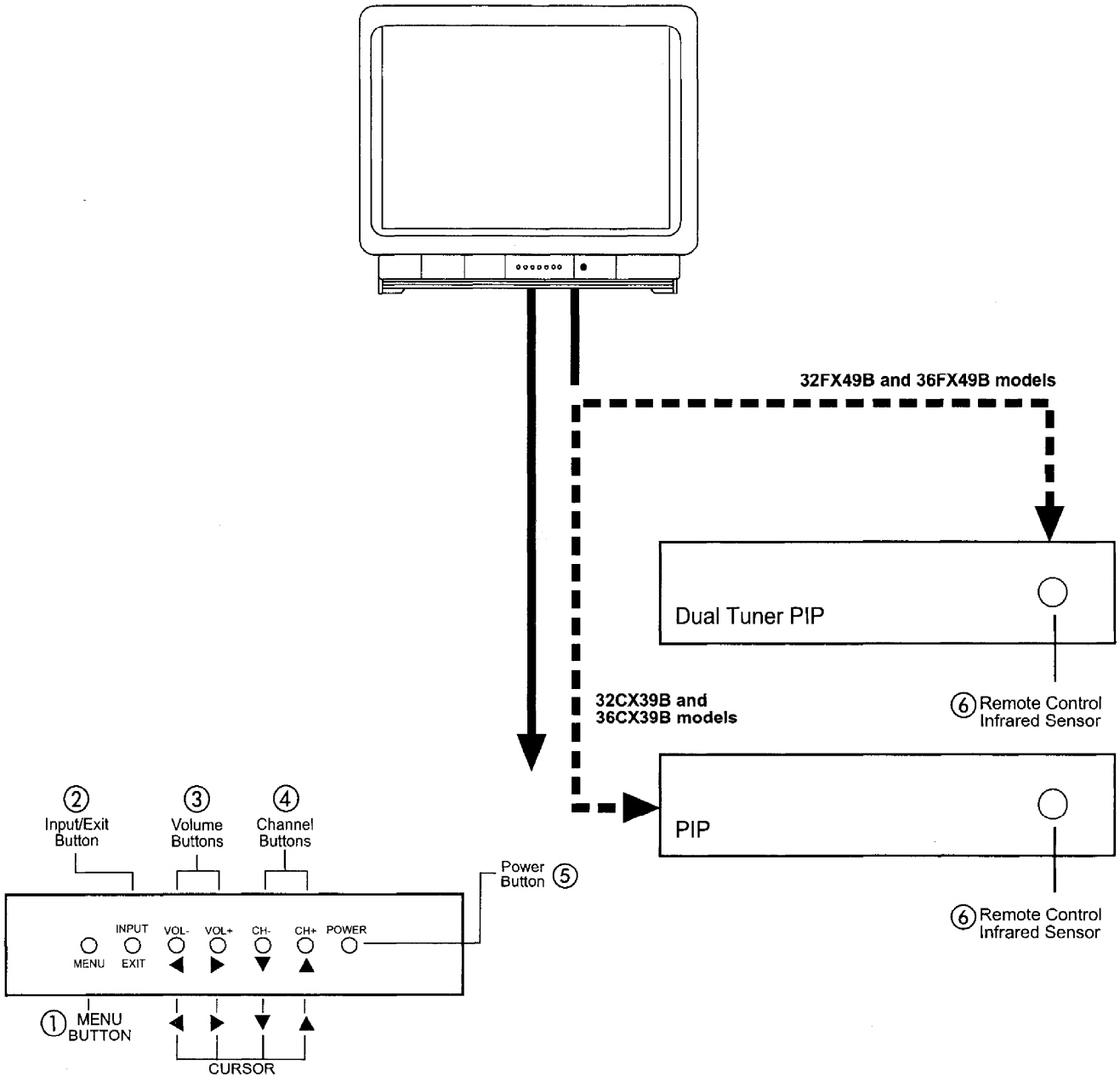
FRONT VIEW



A detailed explanation of the circled numbers is on page 15.

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FRONT PANEL JACKS AND CONNECTIONS

① **MENU Button**
This button allows you to enter the MENU, making it possible to set TV features to your preference without using the remote.

② **INPUT/EXIT Buttons**
Press this button to select the current antenna or VIDEO source. Your selection is shown in the top right corner of the screen. This button also serves as the EXIT button when in MENU mode.

③ **VOLUME Level**
Press these buttons for your desired sound level. This volume level will be displayed on the TV screen.

④ **CHANNEL Selector**
Press these buttons until the desired channel appears in the top right corner of the TV screen.

NOTE: Your HITACHI TV will appear to be turned off if there is no video input when VIDEO Source is selected. Press the INPUT button until the normal broadcast picture appears. If the picture does not appear, the power is OFF.

⑤ **POWER Button**
Press this button to turn the TV on or off.

⑥ **REMOTE CONTROL INFRARED Sensor**
Point your remote control at this area when selectiong channels, adjusting volume, etc.

⑦ **FRONT INPUT JACKS (36/32UX59B models)**
Use these audio/video jacks for a quick hook-up to a camcorder or VCR to instantly view your favorite show or new recording. Press the INPUT button until VIDEO:3 appears in the top right corner of the TV screen. If you have mono sound, insert the audio cable into the left channel jack.

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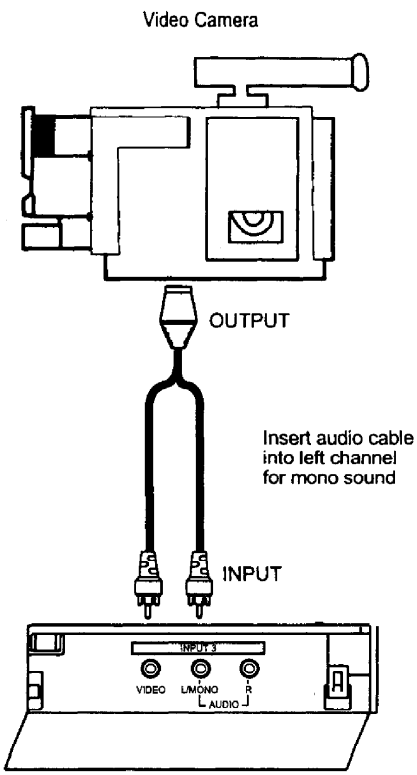
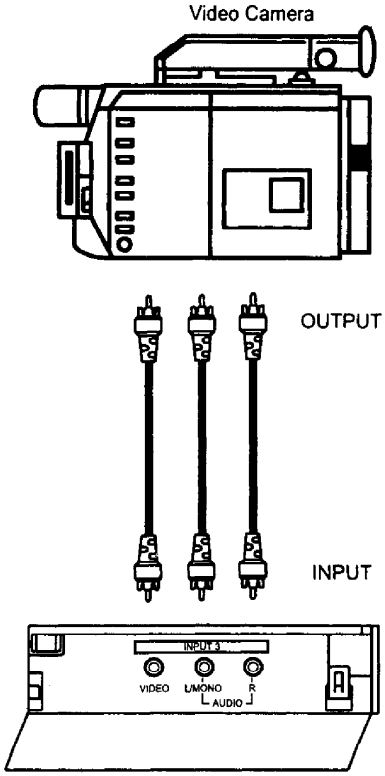
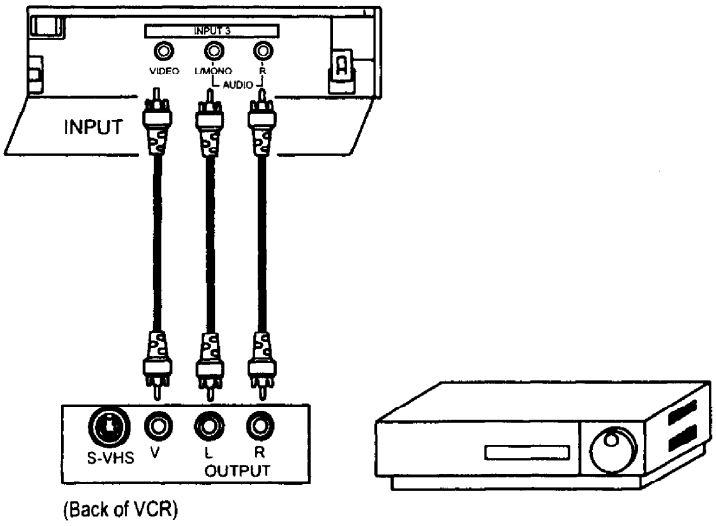
FRONT PANEL JACKS AND CONNECTIONS
36UX59B AND 32UX59B

The front panel jacks are provided as a convenience to allow you to easily connect a camcorder or VCR as shown in the following examples:







NOTE: Completely insert connection cord plugs when connecting to front panel jacks. If you do not, the picture that is played back may be abnormal.

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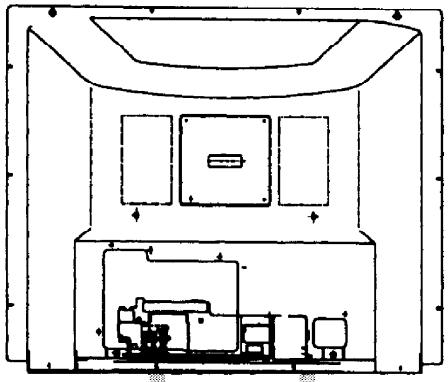
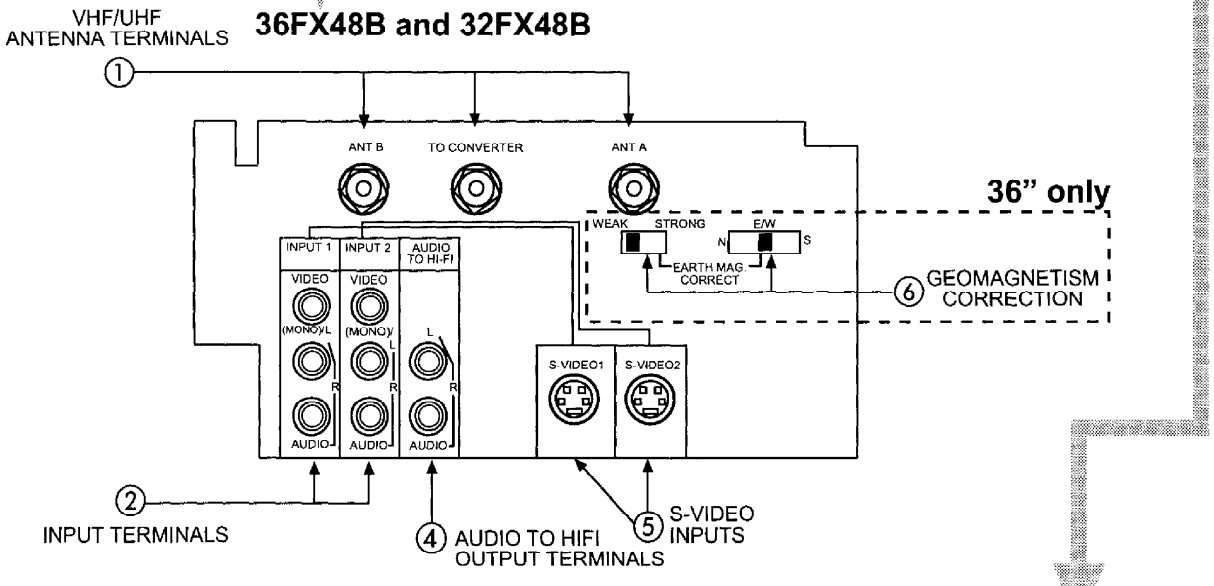
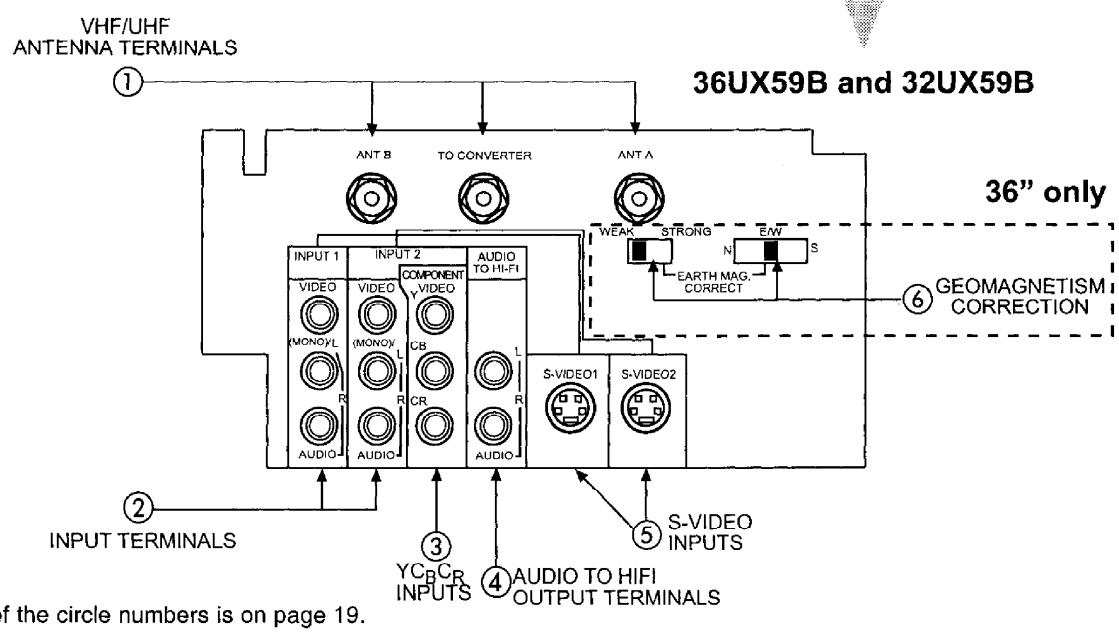
REAR PANEL JACKS
(32UX59B, 32FX49B, 36UX59B AND 36FX49B)







A detailed explanation of the circle numbers is on page 19.

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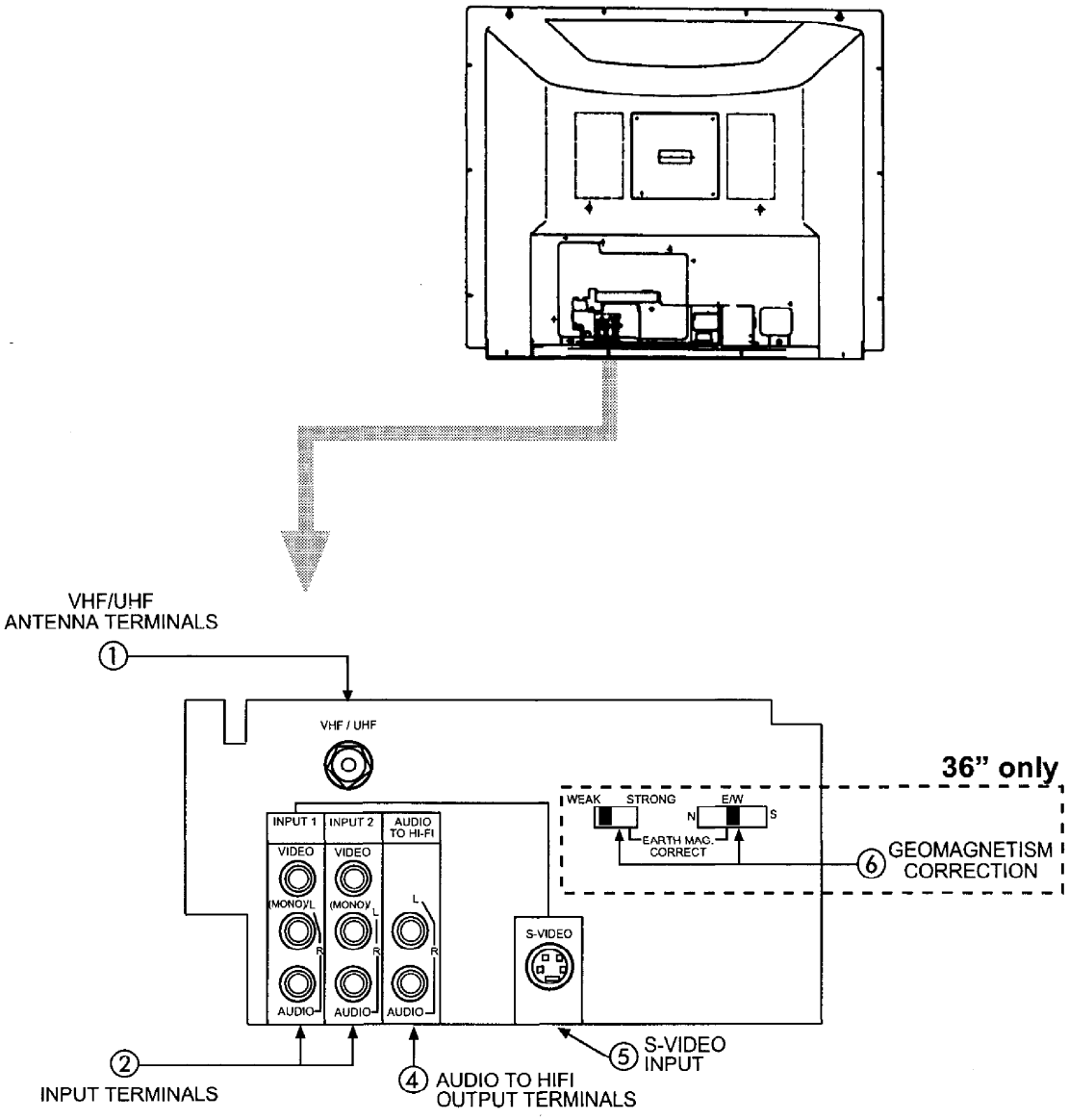
REAR PANEL JACKS (32CX39B AND 36CX39B)



A detailed explanation of the circle numbers is on page 19.

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REAR PANEL JACKS

① **Antenna Input (32CX39 AND 36CX39B)**
The VHF/UHF terminal can be used for normal TV, cable TV (CATV), video game, etc.

Antenna Inputs (36/32FX49B and 36/32UX59B models)
The remote control allows you to switch between two separate 75-Ohm RF antenna inputs, ANT A and ANT B, ANT A input can be displayed as a main picture or sub-picture. ANT B can only be displayed as a main picture. (ANT B cannot be displayed as a sub-picture.) The antenna output labeled "TO CONVERTER" allows ANT A connection to pass directly to a different source such as a cable box.

② **Audio/Video Inputs**
The INPUT button will step through each video source and antenna source input each time it is pressed. Use the audio and video inputs to connect external devices, such as VCRs, camcorders, laserdisc players, etc. (If you have mono sound, insert the audio cable into the left channel jack.)

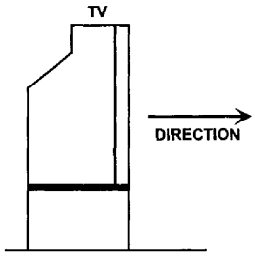
③ **YC_BC_R Input: 2 (32UX59B and 36UX59B models only)**
This input provides $Y\text{-}C_BC_R$ jacks for connectiong equipment with this capability such as DVD player.

NOTE: **36/32FX49B** and **36/32CX39B** models do not have $Y\text{-}C_BC_R$ Inputs.

④ **Audio to HI-FI**
These jacks provide variable audio output to a separate stereo amplifier. With this connection, the audio to the stereo can be controlled by the television's main volume. Use these jacks for the SURROUND Left and Right channels.

⑤ **S-Video**
Inputs 1, 2 for **36/32UX59B** and **36/32FX49B** models and Input 1 for **36/32CX39B** models provide S-Video (Super Video) jacks for connecting equipment with S-Video output capability.

⑥ **Goemagnetism Correction (36" models only)**
The effects of geomagnetism may cause an uneven (partially) colored picture depending on the direction the TV is facing. Adjust the TV as follows for best performance:
1. Turn the Power "Off".
2. Decide on the installation position and direction of the TV. Check the direction the TV is facing at this time.
3. Set the DIRECTION and STRENGTH switches (on back of the TV) according to the direction of the screen as shown in the table.



FACING SCREEN DIRECTION	SWITCH	
	DIRECTION	STRENGTH
North	N	STRONG
Northeast	*E/W	WEAK
East	E/W	WEAK
Southeast	**E/W	WEAK
South	S	STRONG
Southwest	**E/W	WEAK
West	E/W	WEAK
Northwest	*E/W	WEAK

*If the Screen is facing a Northerly direction, set to "N".
**If the Screen is facing a Southerly direction, set to "S".

4. After setting the switches, place the TV in the decided location.
5. After relocating the TV, turn the power "ON" and check to make sure that the screen color (especially at the corners) is even. Depending on the installation location (especially where it is susceptible to goemagnetism, for example, in a reinforced concrete building), in this case, set the DIRECTION and STRENGTH switches to set the optimum picture.
6. In certain areas, if the screen points North or South, color unevenness may be reduced when the STRENGTH switch is set to STRONG rather than WEAK.

NOTE: If you move your TV, the DIRECTION and STRENGTH switches may need to be reset.

TIPS ON REAR PANEL CONNECTIONS

The S-Video connections are provided for high performance laserdisc players, VCRs etc. that have this feature. Use these connections in place of the standard video connection if your device has this feature.

COMPONENT: $Y\text{-}C_BC_R$ connections are provided for high performance components, such as DVD players. Use these connections in place of the standard video connection if your device has this feature.

When using the $Y\text{-}C_BC_R$ input jacks, connect your components audio output to the TV's Input 2 Left and Right Audio inputs jack.

If your device has only one audio output (mono sound), connect it to the left audio jack on the television.

Refer to the operating guide of your other electronic equipment for additional information on connecting your hook-up cables.

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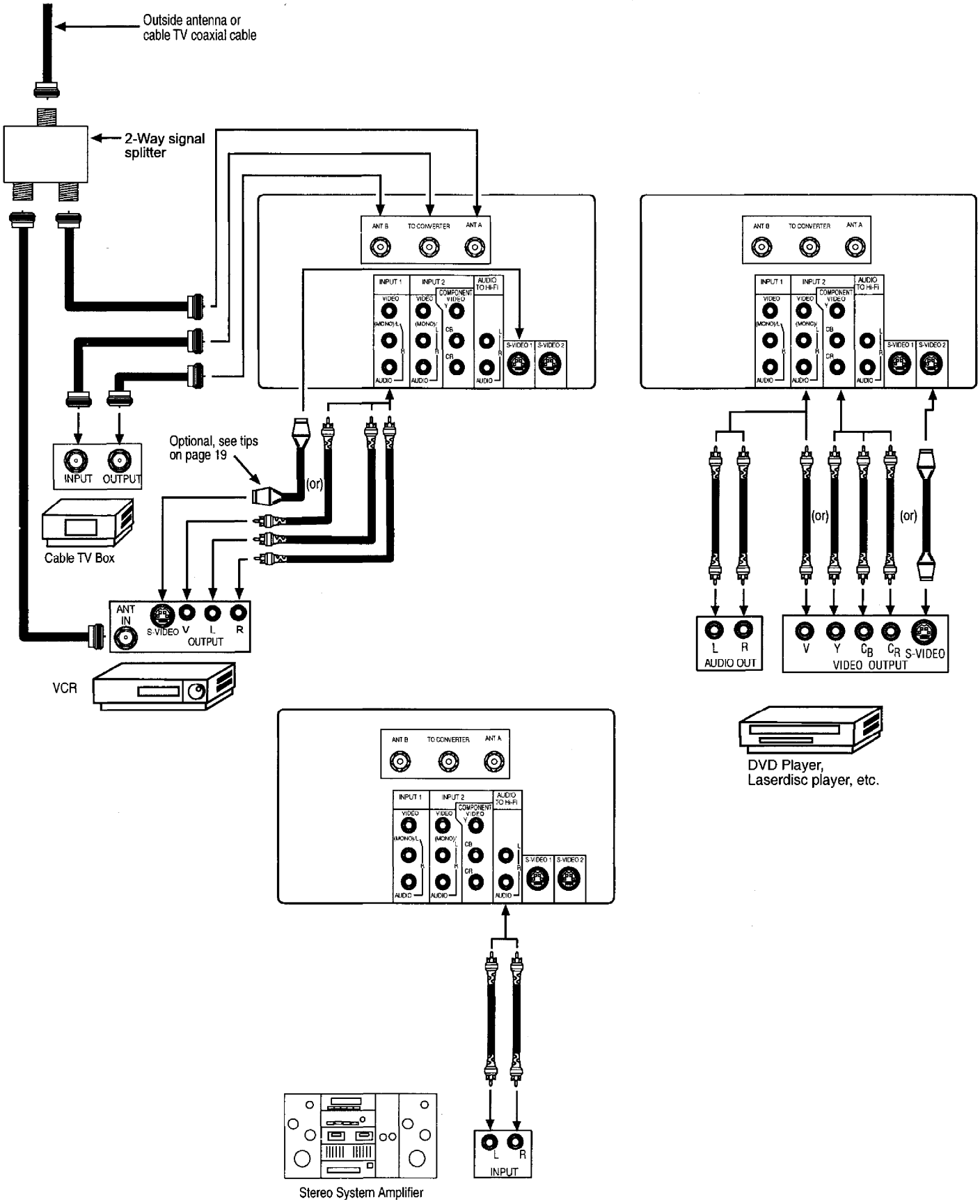
REAR PANEL CONNECTIONS (32UX59B AND 36UX59B)



Typical full feature setup. Follow connections that pertain to your personal entertainment system.

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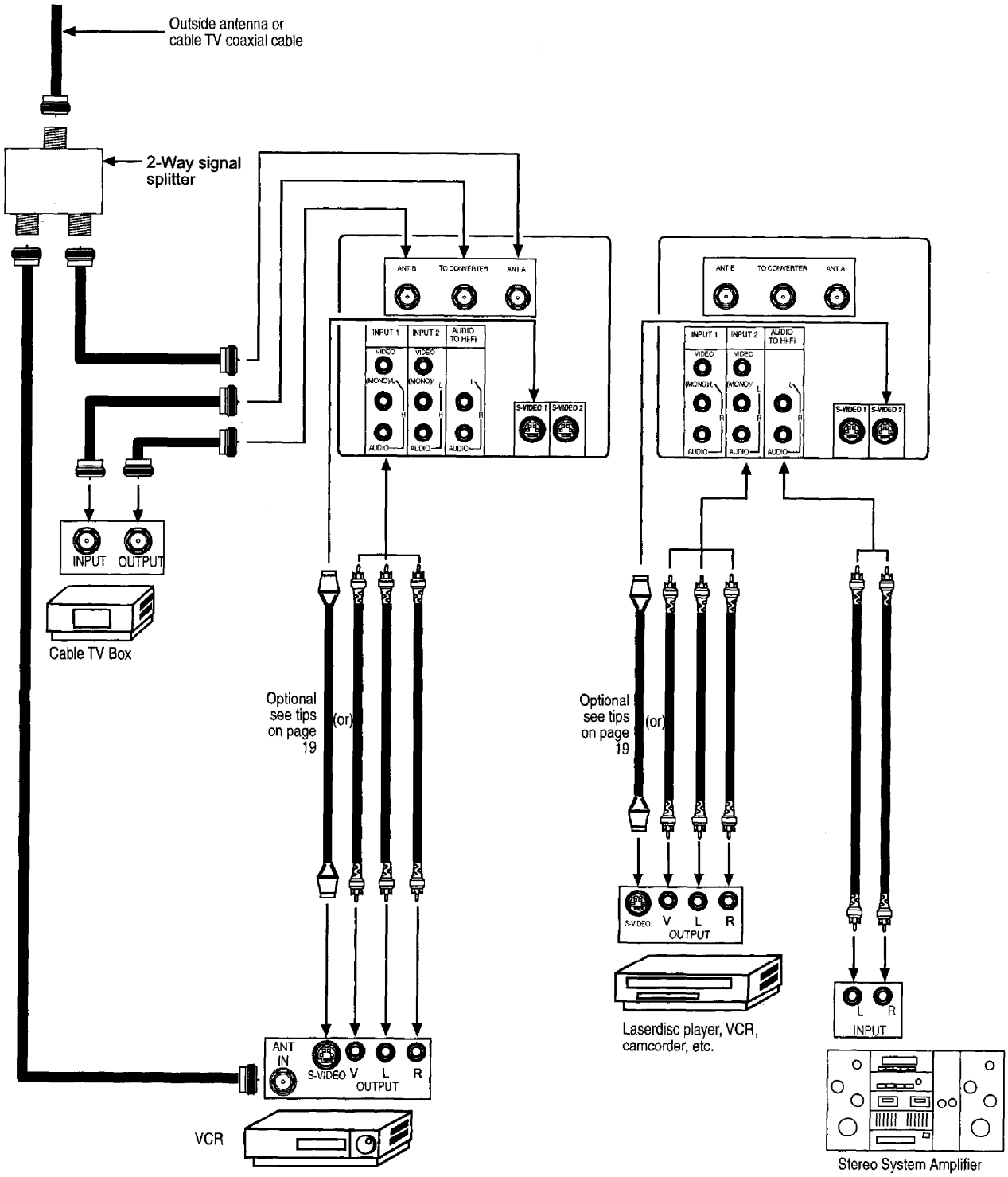
REAR PANEL CONNECTIONS (36FX49B AND 32FX49B)



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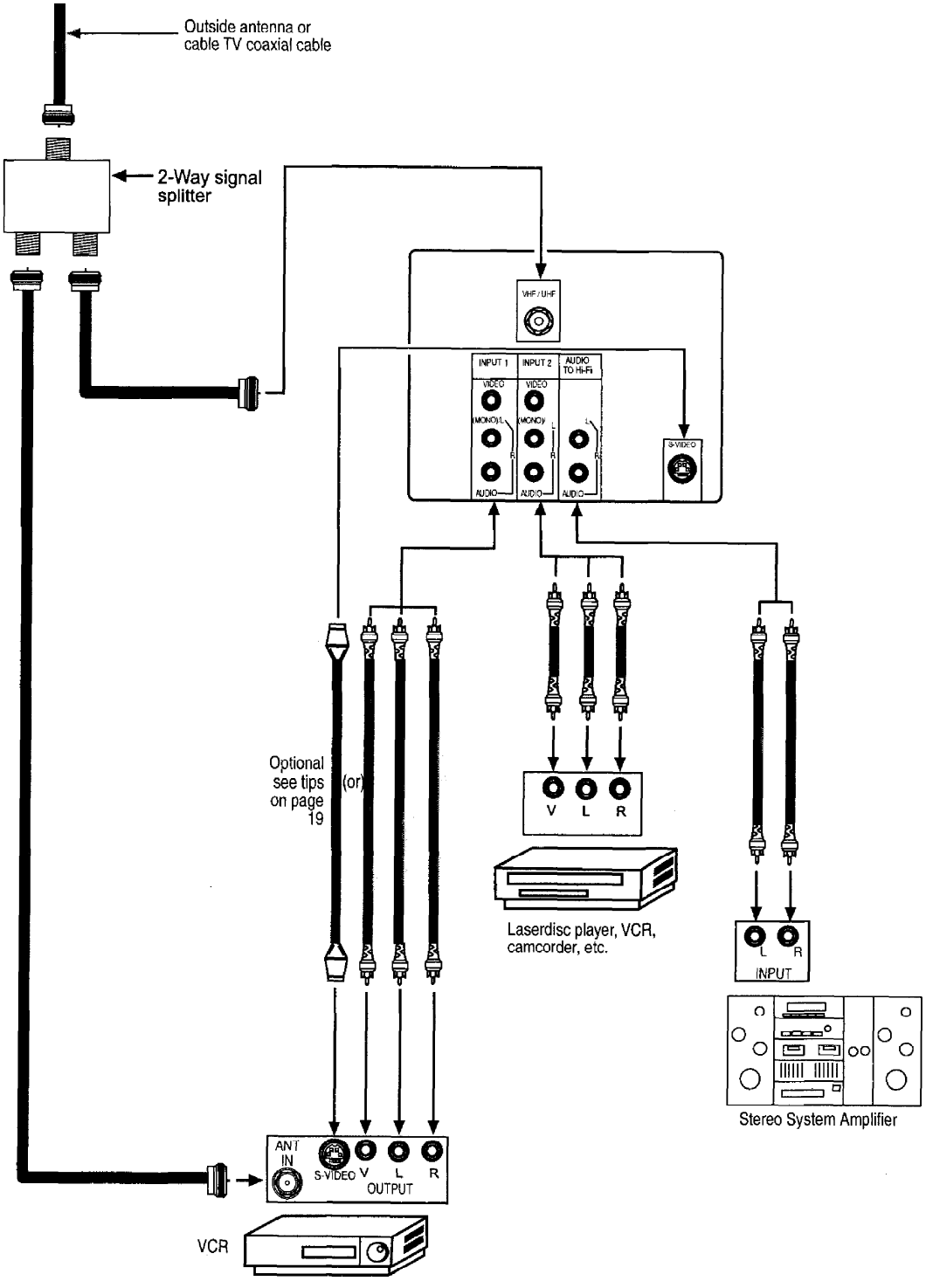
REAR PANEL JACKS (32CX39B AND 36CX39B)



Typical full feature setup. Follow connections that pertain to your personal entertainment systems.

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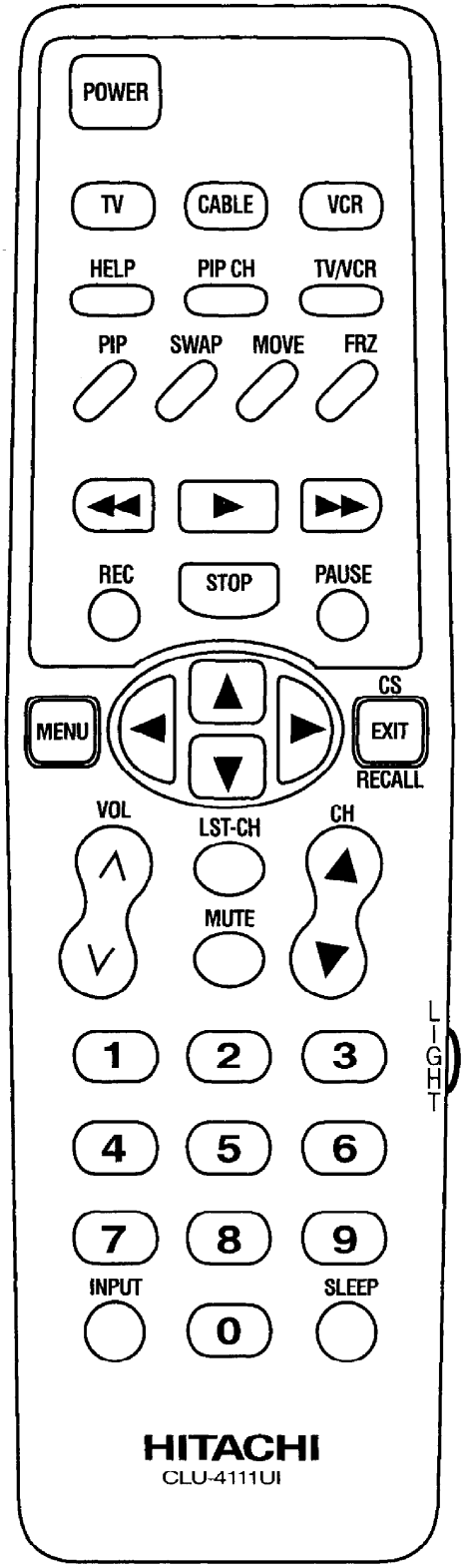
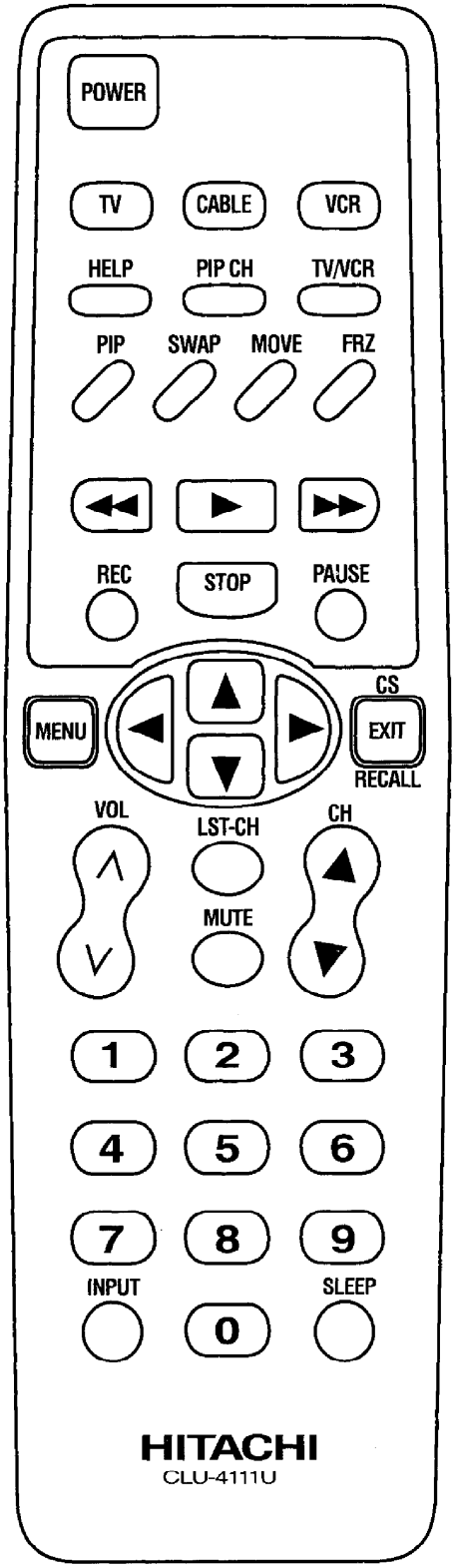
THE REMOTE TO CONTROL YOUR TV





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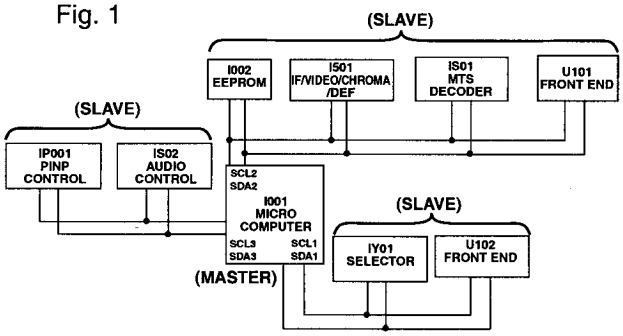
I. MAIN CHASSIS ADJUSTMENT

1. Multi Master I²C Bus System

M9LXU Chassis uses I²C Bus control system. Fig. 1 shows this control system.

Fig. 1

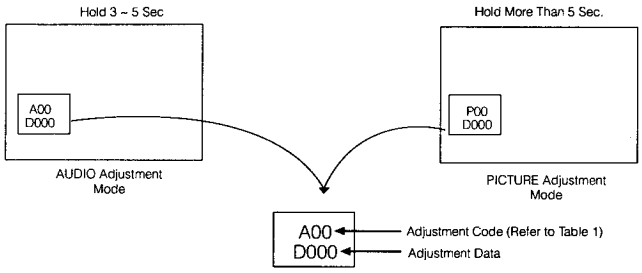


I001 (Master) controls other ICs (Slave). Adjustment data is memorized in I002 (EEPROM). I001 reads this data and controls other ICs (slave). Adjustment items applied in this chassis are shown in Table 1.

2. ADJUSTMENT PROCEDURE-START UP

2-1 How to Get to Adjustment Mode

Chassis adjustment can be done by using the front control panel buttons with CTV set turned off. Press "POWER" and "INPUT" keys at the same time, and hold for more than 3 seconds. The CTV set turns on in adjustment mode with OSD as follows.



"To Escape from Adjustment Mode"
Press "POWER" button of remo-con or front panel once at anytime. Then set returns to normal state.

TABLE 1
Adjustment Code

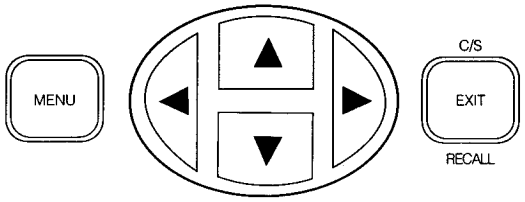
Code Name	Adjustment Mode	Adjustment Data	Item Remark	Service * Mode Data
A00	Audio Adj. Key Code	-	-	-
A01	Stereo VCO adjustment	63~0	4-3-2	34
A02	SAP VCO adjustment	63~0	4-3-5	35
A03	FILTER adjustment	63~0	4-3-3	17
A04	Input level adjustment	63~0	4-3-1	18
A05	Low pass separation adjustment	63~0	4-3-4	29
A06	High pass separation adjustment	63~0	4-3-4	19
P00	Picture Adj. Key Code	-	-	-
P01	Green Gain adjustment	127~0	4-6	045
P02	Blue Gain adjustment	127~0	4-6	054
P03	Red cut off adjustment	255~0	4-4	118
P04	Green cut off adjustment	255~0	4-4	153
P05	Blue cut off adjustment	255~0	4-4	119
P06	Horizontal Phase adjustment	31~0	4-5-1	21
P07	Vertical Phase adjustment	7~0	4-5-2	0
P08	Color Gain adjustment	31~0	4-8	16
P09	Sub Contras adjustment	31~0	4-9	29
P10	Sub Bright adjustment	63~0	4-7	23
P11	Sub Color adjustment	63~0	4-10	24
P12	Sub Tint adjustment	63~0	4-11	46
P13	Sub Sharpness adjustment	63~0	4-12	10
P14	W/B G ∝ adjustment	127~0	4-13	068
P15	W/B B ∝ adjustment	127~0	4-14	077
P16	PinP H Position adjustment	63~0	4-15	0
P17	PinP Tint adjustment	63~0	4-16	61
P18	PinP Contrast adjustment	127~0	4-2-2	050
P19	PinP Color-Sat adjustment	127~0	4-2-1	042
P20	PinP Sharp adjustment	3~0	4-17	0

* This data is an approximate service code data. Fine adjustment must be done using the specified test procedure and adjustment tools.

2-2 Changing Data and Adjustment Code

When the CTV set is in adjustment mode, the cursor ▲,▼,◀,▶ and MENU keys of the customers remo-con will be the adjustment keys.

A. Use any Hitachi remote control when making an adjustment.



▲,▼ keys are used for changing adjustment code.
◀,▶ keys are used for changing data.
MENU key is used for changing "Cut Off Mode"/"Normal mode." (Refer to cut off adjustment)

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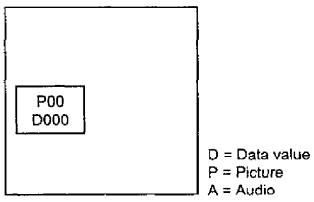
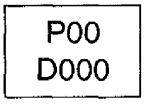
3. ADJUSTMENT MODE

1. Before turning ON the set, press and hold the POWER button and INPUT button for about 3 seconds.

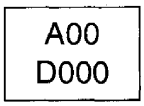
2. After 3 seconds, a small square will appear in the left center of the screen. There are two different displays, depending upon how long the POWER and INPUT buttons are pressed and held. One shows A and D for audio adjustment, and the other shows P and D for the picture adjustment.



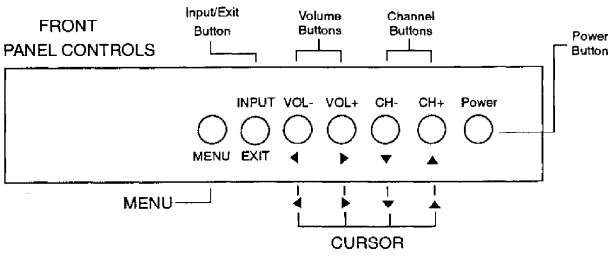
3. To activate the picture adjustment mode, input a data value of 30 (D030), using the front panel cursor ◄,► before any of the picture adjustments can be adjusted.

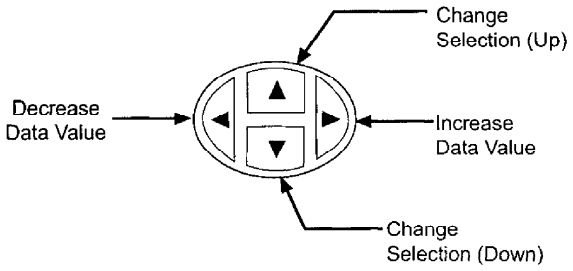


The same for the audio adjustment. To activate the adjustment, you need an input data value of 20 before any of the audio adjustments can be adjusted.



4. To make a selection, you have to use the CURSOR keys on front control panel.





Match front panel control cursor to remote control cursor.

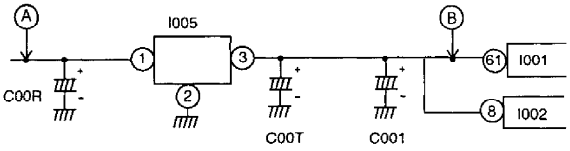
4. ADJUSTMENT PROCEDURE

4-1 Initial setting of EE Prom (1002)

Adjustment Preparation

Add +12V to Ⓐ point and check Ⓑ point is 5V±0.3V

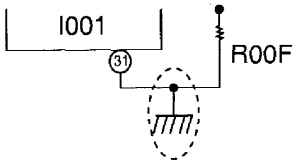
Note: Keep adding +12V more than 5 seconds.



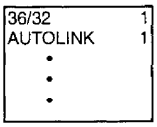
Adjustment procedure

(1) Receive circle pattern or broadcast signal.

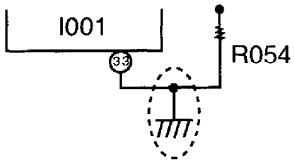
(2) Short I001 pin #31 to GND.



(3) Check following OSD appears



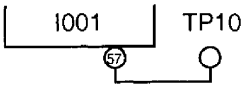
(4) Short I001 pin #33 to GND, momentary.



(5) Check receiving channel goes to 03ch.

Other checking method: Check TP10 is "H" (About 5V) Before EEPROM initial and "L" (About 0V) after EEPROM initial.

I001 changes TP10 to "L" after EEPROM initial operation.



(6) Delete short.

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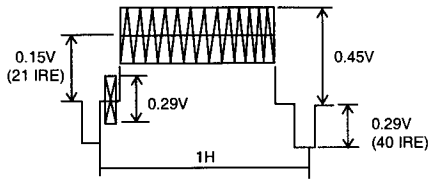
4-2 PinP ADJUSTMENT

4-2-1 Color amplitude

Adjustment Preparation

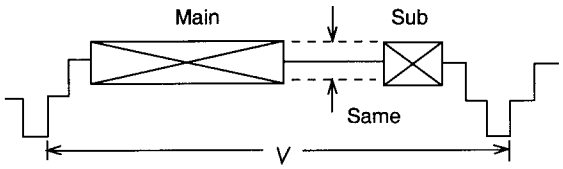
(1) Input red pattern signal to Video:1.



(2) Turn CTV set ON.
(3) Select PinP adjustment code, "P19."
(4) Connect oscilloscope to pin ⑤ of PIPA connector base.

Adjustment Procedure

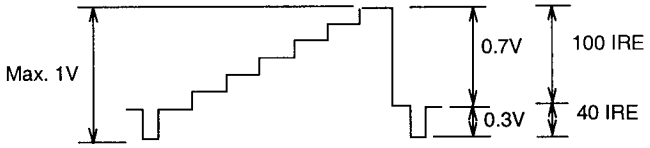
(1) Change data of "P19" so that the amplitude of main and sub signal level are the same.



4-2 Y amplitude

Adjustment Preparation

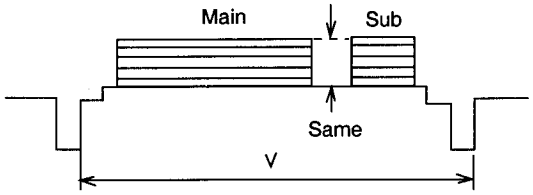
(1) Input 5 step signal to Video:1.



(2) After adjustment of color amplitude, connect oscilloscope to pin ⑮ of PIPA connector base.
(3) Select PinP adjustment code "P18."

Adjustment Procedure

(1) Change data so that the amplitude of main and sub signal white peak level are the same.



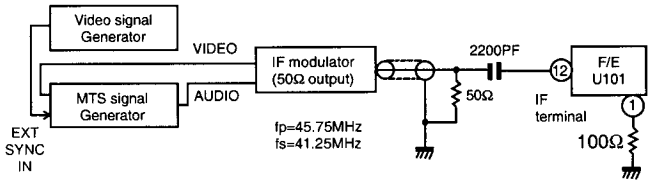
4-3 MTS ADJUSTMENT

4-3-1 Input Level Adjustment

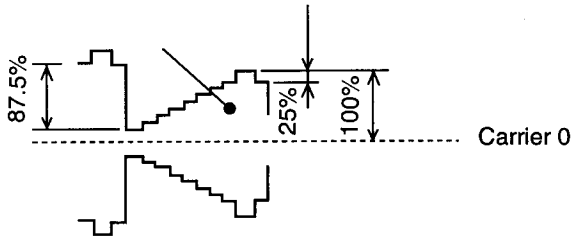
Adjustment Preparation

(1) Apply a signal to F/E U101. IF output terminals of Main PWB using the circuit shown below. And connect the AGC terminal ① of U101 to GND with a 100Ω resistor.

Note : Video signal and Audio Signal should be synchronized.



IF modulator output signal waveform
(Color bar or all white)



IF modulator output level and P/S
P=105dBu (50Ω termination)
S level; -3dB to P level
At this time, S/N ratio of F/E
video output is 45dB or less.

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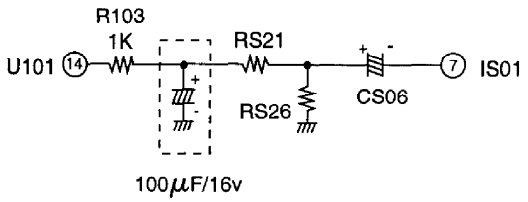
Sound modulation condition:
Noise reduction encoder: ON
Stereo signal;
① R=0 (L only), 300Hz, 30% modulation (see note)
② R=0 (L only), 3kHz, 30% modulation (see note)
Monaural signal;
③ Monaural, 400Hz, 100% modulation (PRE-EN Off)
SAP signal;
④ SAP, 300Hz, 30% modulation (see note)
(2) Connect AC voltmeter Vo to IS01 pin ㉖. Use the AC voltmeter of Matsushita model VP-950C or equivalent.
(3) Apply +9V to I501, I402 (add +9V to pin ① and 12V to pin ④ of PNH2 connector)
(4) Same as item 4-1 (1).
(5) Select adjustment code "A04"

Adjustment Procedure
(1) Select sound input ③ and adjust the data "A04" to Vo= 500mVrms±10mVrms at IS01 pin ㉖ .

4-3-2 Stereo VCO adjustment

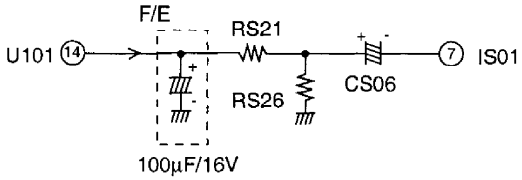
Adjustment Preparation
(1) Same as items 4-3-1(3) and 4-1(1).
(2) Connect a frequency counter to IS01 pin ㉖. Use 1:1 Probe.
(Probe standard Ri≥1MΩ, Ci ≤ 15pF)
(3) Should be no signal in pin ⑦ (IS01).
(4) Connect capacitor (100μF/16v) as it is shown.
(5) Select adjustment code "A01."

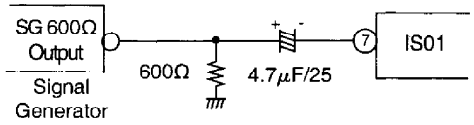


Adjustment Procedure
(1) Adjust the data "A01" to set 15.73±0.1KHz by ◀,▶ keys.
(2) Delete capacitor (100μF/16v)

4-3-3 Filter Adjustment

Adjustment Preparation
(1) Set capacitor 100 μF/16V as it is shown.
(2) Apply the signal to IS01 pin ⑦ with the circuit as it is shown.





ⓐ SG output signal spec.
① Frequency
f=15.73kHz (Sine wave)
② Signal Level
V=100mVrms

(3) Connect an AC voltmeter or oscilloscope to IS01 pin ㉖.
(4) Select adjustment code "A03."

Adjustment Procedure
(1) Adjust the data "A03" so that the voltage of IS01 ㉖ pin becomes minimum by ◀,▶ keys.

4-3-4 Separation Adjustment

(The adjustment of items 4-3-1 and 4-3-3 must be completed first)

Adjustment Preparation
(1) Use the same circuit as input level adjustment 4-3-1(1).
(2) Connect an AC voltmeter to IS01 pin ㉖ or connect an oscilloscope.
(3) Select adjustment code "A05" and set data "D032".

Adjustment Procedure
(1) Select input signal ① and select adjustment code "A05". Adjust by ◀,▶ keys so that 300Hz level becomes minimum (L separation adjustment)
(2) Select input signal ② and select adjustment code "A06". Adjust by ◀,▶ keys so that 3KHz level becomes minimum (H separation adjustment).
(3) Repeat (1) and (2). Adjustment precision: within +1dB from minimum point.

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4-3-5 SAP VCO Adjustment

Adjustment Preparation

(1) Connect a frequency counter to IS01 pin (26) .
(2) Select adjustment Code "A02".
(3) Connect same circuit as in item 4-3-2(5).

Adjustment Procedure

(1) Adjust the data "A02" by ◀,▶ keys so that the frequency is 78.67+0.5KHz.

4-4 Cut-Off Adjustment (Picture Adjustment)

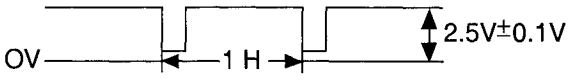
Adjustment Preparation

(1) Connect an oscilloscope at R, G, B output.
(2) Receive circle pattern signal.

	1501
R output	pin (43)
G output	pin (42)
B output	pin (41)

Adjustment Procedure

(1) Select adjustment code "P03" and press "MENU" button.
(2) Use the cursor key ◀,▶ to adjust the red cut-off until the amplitude of the red output waveform is 2.5V±0.1V as shown below. Adjustment for G and B are the same procedure as R cut-off adjustment. The only difference is the data for G cut-off is "P04" and B cut-off is "P05."



4-5 Deflection Circuit Picture Adjustment

4-5-1 Horizontal Center Adjustment

Adjustment Preparation

(1) Apply heat-run 5 minutes or more after the power is turned on.
(2) Receive circle pattern signal.
(3) Set CONTRAST to maximum and others to center.
(4) Select adjustment code "P06".

Adjustment Procedure

(1) Adjust horizontal center so that difference of right and left size marker is within 0.5 by adjustment code "P06", using ◀,▶ keys.

4-5-2 Vertical Size and phase Adjustment (R605)

Adjustment Preparation

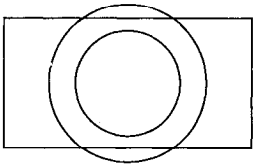
(1) Apply heat-run 5 minutes or more after the power is turned on.
(2) Receive circle pattern signal, and set CONTRAST to maximum and others to center.
(3) The set should face the north or south direction.

Adjustment Procedure

(1) Adjust vertical center and size so that the outer circle of the circle pattern is like the figure below by using ▲,▼,◀,▶ keys and VR "R605".

V Center → Adjustment code "P07"
V Size → VR "R605"

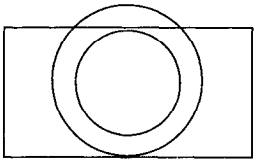
i) Standard Condition



32":
1/2 of the width of outer circle comes to the screen.

36":
Inner circle comes in contact with the bottom and top of the screen.

ii) When the picture center is above CPT center at V center minimum.



When the picture center is above CPT center, adjust so that the bottom of the outer circle comes in contact with the bottom of the screen.

4-5-3 Side pin distortion adjustment (R777)

Adjustment Preparation

(1) Receive crosshatch signal and set CONTRAST to maximum.

Adjustment Procedure

(1) Adjust R777 so that the line of the right and left is straight.
spec. DL, DR ≤ 5mm (for 32V)
spec. DL, DR ≤ 7mm (for 36V)

4-5-4 Horizontal size adjustment (R755)

Adjustment Preparation

(1) Receive Circle Pattern signal.
(2) Set CONTRAST to maximum and BRIGHTNESS to center.

Adjustment Procedure

(1) Vary R755 so that the horizontal size markers at the right and left ends are within 1.5 (+0.5, -0).

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4-6 White Balance Adjustment

Adjustment Preparation

(1) Apply heat-run 10 minutes or more after the power is turned on.
(2) Check that the purity adjustment has been completed.
(3) Set the vertical incident illumination on the CPT surface to 20 lux or less.
(4) Receive white raster signal.
(5) Set the color temperature control (white control) to cool.
(6) Set data of P01 and P02 to D128.
(7) Turn the screen adjusting VR fully counter clockwise.
(8) Set cut-off mode (see item 4-4).

Adjustment Procedure

(1) Turn the screen adjusting VR clockwise and set it to the position where the bright colored line starts appearing on CPT screen.
(2) Do not change the cut-off data (this data is named "CODE-A") corresponding to the color first appearing.
(3) Turn the screen fully clockwise adjusting VR when a bright color line does not appear.
(4) Adjust the cut-off data except Code-A so that the red, green and blue bright colored line appear on the screen equally by using ▲,▼,◀,▶ keys.
(5) Set to normal mode by pressing "MENU" key.
(6) Change G and B data ("P01 and P02") by using ◀,▶ keys and adjust the high-brightness white balance.
(7) Adjust picture control to minimum and check that the low-brightness white balance is obtained by directly observing the low-brightness without using a mirror.
(8) When the low brightness white balance is not obtained, adjust other low-brightness white balance code except Code-A and return to item (6). White balance color temperature setting 10800°K + MPCD.
(9) Set white control (color temperature control) to warm, and check that color temperature is approx. 7,200°K

	Adjustment Code
R cut off	P03
G cut off	P04
B cut off	P05
G drive	P01
B drive	P02

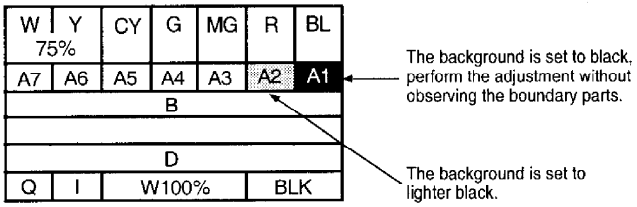
4-7 SUB-BLACK LEVEL ADJUSTMENT

Adjustment Preparation

(1) Apply heat-run for 10 min. or more after the power is turned on.
(2) Receive color bar signal.
(3) Set CONTRAST and color controls to min.
(4) Set the vertical incident illumination on the CPT surface to 20 lux or less.
(5) Set BRIGHTNESS control to the center position.
(6) Select adjustment code "P10".

Adjustment Procedure

(1) Adjust "P10" data by using ◀,▶ keys. The backgrounds of A1 is set to black and A2 is set to lighter black.



(2) Check by directly observing the CPT surface, without using a mirror.

4-8 COLOR GAIN ADJUSTMENT

Set adjustment code "P08".
Set data "16" by ◀,▶ keys.

4-9 SUB CONTRAST ADJUSTMENT

Set adjustment code "P09".
Set data "29" by ◀,▶ keys.

4-10 SUB COLOR ADJUSTMENT

Set adjustment code "P11".
Set data "24" by ◀,▶ keys.

4-11 SUB TINT ADJUSTMENT

Set adjustment code "P12".
Set data "46" by ◀,▶ keys.

4-12 SUB SHARPNESS ADJUSTMENT

Set adjustment code "P13".
Set data "10" by ◀,▶ keys.

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4-13 W/B G ∝ ADJUSTMENT
Set adjustment code "P14."
Set data "068" by ◀,▶ keys.

4-14 W/B B ∝ ADJUSTMENT
Set adjustment code "P15."
Set data "077" by ◀,▶ keys.

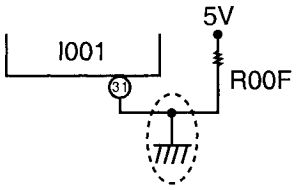
4-15 PINP H POSITION ADJUSTMENT
Set adjustment code "P16."
Set data "00" by ◀,▶ keys.

4-16 PINP TINT ADJUSTMENT
Set adjustment code "P17."
Set data "61" by ◀,▶ keys.

4-17 PINP SHARP ADJUSTMENT
Set adjustment code "P20."
Set data "0" by ◀,▶ keys.

II. FUNCTION SETTING
M9LXU Chassis has the data for setting variety functions in EEPROM (I002).
Microcomputer (I001) set the functions needed for each model according to EEPROM data (memory switch data).

1. HOW TO SET MEMORY SWITCH SETTING MODE
(1) Short circuit I001 pin #31 to GND.



An OSD will appear on the screen as follows.

36/32	1
A LINK	1
P1	0
P2	0
V-CHIP	1
INPUT	1
D BASS	1
TUNER	1

Function name Data

Cursor and data are changed by ▲,▼,◀,▶ button. After setting data, press "EXIT" button. Then MEMORY INITIALIZE operation start. After complete MEMORY INITIALIZATION, check receiving channel goes to 03CH.
Note: Press "MENU" or delete I001 pin #31 short to escape from setting mode.
(2) Delete I001 Pin #31 short after the operation is completed.

2. EXPLANATION OF MEMORY SWITCH FUNCTIONS
(1) 36/32
Selects 36 or 32.
Data "1" - 36 or 32.
Data "0" - not 36 or 32.
(2) A LINK
Selects AUTO LINK function.
Data "1" - Apply AUTO LINK function.
Data "0" - Do not apply AUTO LINK function.
(3) P1, P2 (Power)
Initial settings at plug in.

P1	P2	
0	0	...Power off mode (normal).
1	0	...Power on at last state.
0	1	...Power on at video mode.
1	1	...Power on at TV (4CH) mode.

(4) V-CHIP
Selects V-CHIP Function or not.
Data "1" - Apply V-CHIP function.
Data "0" - Do not apply V-CHIP function.
(5) INPUT
Apply VIDEO:3 Input or not.
Data "1" Apply VIDEO:3 Input.
Data "0" Do not apply VIDEO:3 Input.
(6) D BASS (Dynamic Bass)
Apply dynamic bass function or not.
Data "1" - Apply dynamic bass function.
Data "0" - Do not apply dynamic bass function.
(7) Tuner
Select tuners, one tuner or two tuners.
Data "0" - Selects one tuner.
Data "1" - Selects two tuners.

TABLE 2 MODEL AND DATA TABLE

DATA NAME	MODEL NAME		
	36UX59B 32UX59B	36FX49B 32FX49B	36CX39B 32CX39B
36/32	1	1	1
A LINK	1	1	1
P1	0	0	0
P2	0	0	0
V-CHIP	1	1	1
INPUT	1	0	0
D BASS	1	0	0
TUNER	1	1	0

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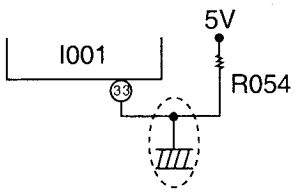
III. MEMORY INITIALIZE

1.MEMORY INITIALIZE OPERATION CHECK

Adjustment Procedure

(1) Short Circuit I001 Pin #33 to GND.



(2) Check that the receiving channel goes to CH03 and the setting should become to delivery setting automatically.

(3) Delete short from I001 pin #33.

IV. OPERATION CHECK

1. AFC OPERATION CHECK

Adjustment Preparation

(1) Connect the circuit as shown below to the ANT terminal.

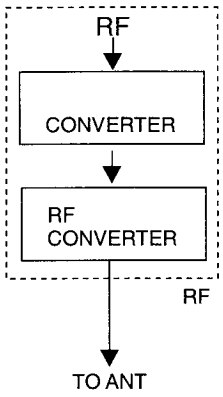
Adjustment Procedure

(1) Receive a standard carrier (not offset) with the channel up/down or direct selection buttons.

(2) Receive an offset signal of +1.5MHZ. Check that it is pulled into the standard tuning point.

(3) Receive an offset signal of -1.5MHZ. Check that it is pulled into the standard tuning point. (Perform the channel selection operation again.)
Note: Modulation signal should be used at the circle pattern and the color bar signal.

Checking circuit
(All channel converter can be used)



2. CHANNEL SELECTION CIRCUIT OPERATION CHECK

2-1 Channel Up/Down Selection

Adjustment Preparation

(1) Set the TV set so that VHF (11, 13CH), UHF (14, 46, 63CH) and CATV (A, E, P, WCH) can be received.

(2) Set Signal Source mode to Antenna on the set up menu. (Press the Menu key, and select Setup, then select Signal Source mode, See next page.)

Adjustment Procedure

(1) Check that VHF are received correctly by pressing CH Up (▲) or Down (▼) button.

Adjustment Preparation

(3) Set Signal Source mode to CATV 1.

Adjustment Procedure

(2) Perform the same operation as in Item (1), and check that VHF and CATV are received correctly.

Adjustment Preparation

(4) Set Signal Source mode to CATV 2.

Adjustment Procedure

(3) Perform the same operation as in Item (1), and check that VHF and CATV are received correctly.

Note: This check should be done to both ANT A and B. (**36/32UX59B** and **36/32FX49B** models)

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2-2 CH Up/Down

Adjustment Preparation

(1) Set the TV set so that VHF (11, 13CH), UHF (14, 46, 63CH) and CATV (A, E, P, W CH) can be received.

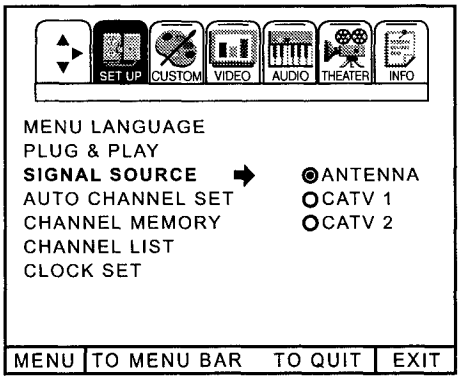
Adjustment Procedure

(1) Set Signal Source mode to Antenna on the SET UP menu.

(2) Select Auto CH set mode and press (▶) key on the set up menu. After Auto CH set, operation is completed. By pressing the channel Up (▲) or Down (▼) button, check that the channels having broadcast signal (s) can be received.

(3) Set Signal Source mode to CATV 1.

(4) Perform the same operation as in Item (2) and check that CATV can be received correctly.



SET UP MENU

Adjustment Preparation

(2) Set the CHANNEL LIST mode (in SET UP menu).
Note: CATV channels, actual input channels numbers and indicated channel numbers shown in Table 3 below.

Adjustment Procedure

(5) Check that the item of SCAN of channels which can be selected as above is ON.

Note 1: CATV channels, actual input channel numbers and indicated channel numbers.

A.....14
E.....18
P.....29
W.....36

Note 2: This check should be done to both ANT A and B.
(**36/32UX59B** and **36/32FX49B** models)

TABLE 3

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
MID BAND								SUPER BAND														

W+1	W+2	W+3	W+4	W+5	W+6	W+7	W+8	W+9	W+10	W+11	W+12	W+13	W+14	W+15	W+16	W+17	W+18	W+19	W+20	W+21	W+22	W+23
37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59
HYPER BAND																						

W+24	W+25	W+26	W+27	W+28	W+29	W+30	W+31	W+32	W+33	W+34	W+35	W+36	W+37	W+38	W+39	W+40	W+41	W+42	W+43	W+44	W+45	W+46
60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82
HYPER BAND					ULTRA BAND																	

W+47	W+48	W+49	W+50	W+51	W+52	W+53	W+54	W+55	W+56	W+57	W+58	A-5	A-4	A-3	A-2	A-1	W+59	W+60	W+61	W+62	W+63	W+64
83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
ULTRA BAND												MID BAND					ULTRA BAND					

W+65	W+66	W+67	W+68	W+69	W+70	W+71	W+72	W+73	W+74	W+75	W+76	W+77	W+78	W+79	W+80	W+81	W+83	W+83	W+84
106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125
ULTRA BAND																			

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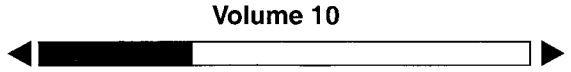
2-3 VOLUME UP/DOWN

Adjustment Procedure

(1) Check that the volume level and volume indication is going up or down simultaneously by pressing volume Up (▲) or Down (▼) button.



2-4 POWER ON/OFF

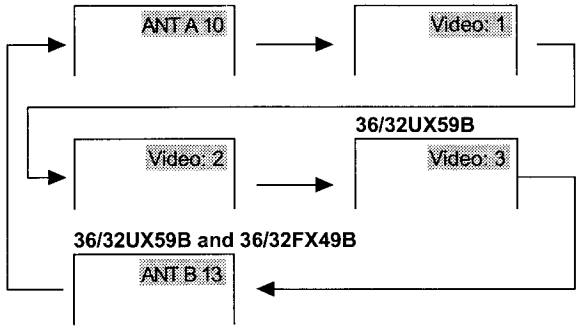
Adjustment Procedure

(1) Check that the power alternates between On and Off with each press of the Power button.

2-5 INPUT

Adjustment Procedure

(1) Check that the O.S.D. changes with every press of the Input button, as below.

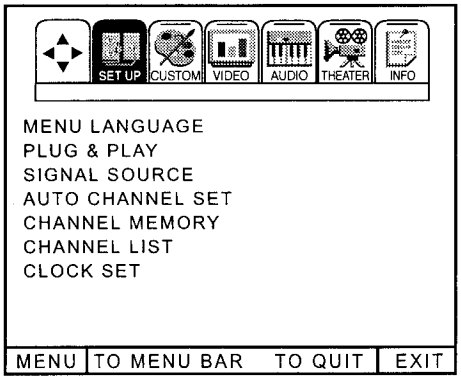


Note 1: The selected input appears on a gray background.
Note 2: **36/32CX39B** models do not have ANT B Input.

2-6 MENU

(1) Check that the Menu O.S.D. displays by pressing Menu button.
Note: Menu O.S.D. is displayed as below.

MENU OSD



(2) After Menu O.S.D. is displayed, check that front panel buttons function change as follows:

Menu	→	MENU
CH Up	→	▲ key
CH Down	→	▼ key
Volume Up	→	▶ key
Volume Down	→	◀ key

2-7 MENU MODE (using Remo-con)

2-7-1 Set Up Mode

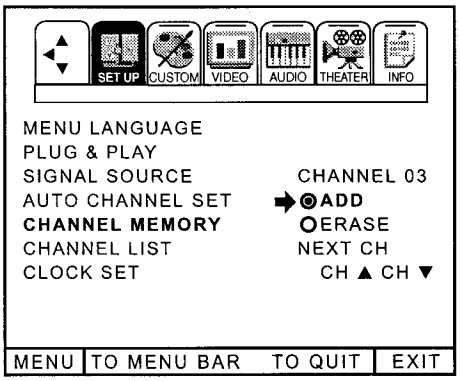
Adjustment Preparation

(1) Set to CHANNEL MEMORY mode (SET UP Menu).

Adjustment Procedure

(1) Check the selection of ADD, ERASE by pressing the ▲(▼) button.

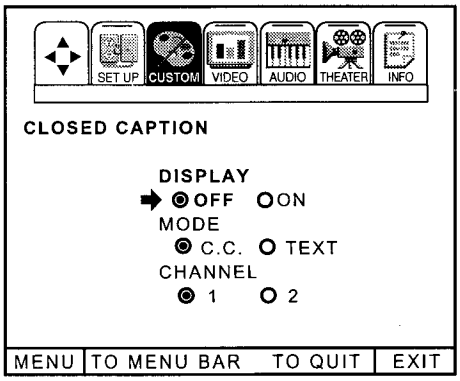
SET UP MENU



Adjustment Preparation

(2) a. Set the mode to CLOSED CAPTION (CUSTOM Menu)
b. Receive signal having Closed Caption signal.

CUSTOM MENU



Adjustment Procedure

(1) Set DISPLAY setting to ON with ▶ button.
At this time, set the other settings as follows.
1. DISPLAY : ON
2. MODE : C.C.
3. CHANNEL : 1

(2) Check that the Caption corresponding to the above setting is displayed on the screen.
(3) Set CHANNEL to 2.
(4) Check that the Caption of Channel 2 is displayed on the screen.
(5) Set CHANNEL to 1.
(6) Check that the Caption of Channel 1 (Field 2) is displayed on the screen.
(7) Set the mode to TEXT.

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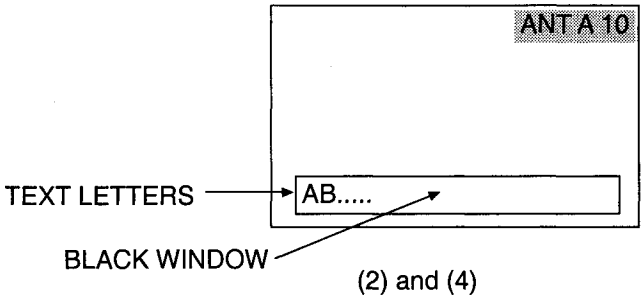
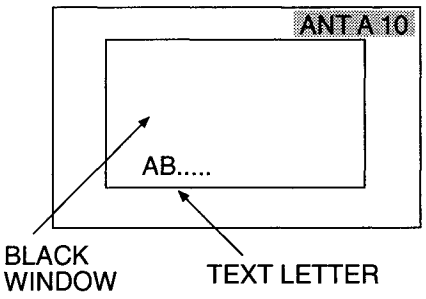


(2) and (4)

(8) Check that a black window appears and text letters are displayed at the center of the screen.
(9) Repeat adjustment procedure from (3) to (6), and check that text letters are displayed corresponding to each mode.
(10) Set the mode to CAPTION.
(11) The black window should disappear returning to the state of (2).
(12) Set ON/OFF to OFF.
(13) Check that the Caption letters disappear.

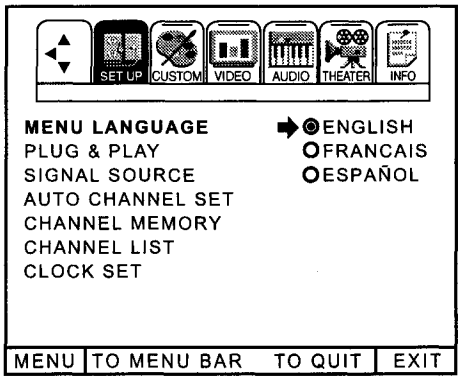


(8) and (9)

Adjustment Preparation
(3) Set to MENU LANGUAGE mode (SET UP Menu)

Adjustment Procedure
(14) Check the language selection (ENGLISH, FRENCH, SPANISH) by pressing the ▼(▲) button.

SET UP MENU

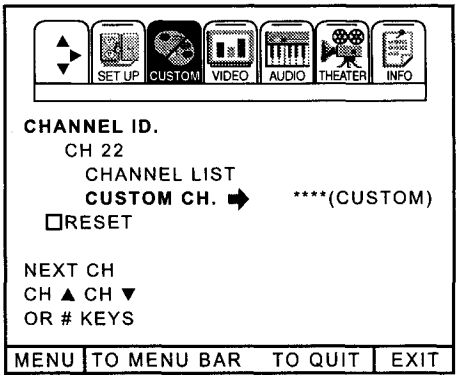


2-7-2 Program Mode

Adjustment Preparation
(1) Set to CHANNEL ID mode (CUSTOM Menu).
(2) Select CUSTOM CH by pressing the ▲,▼ button.

Adjustment Procedure
(1) Select the "A" by pressing the ▲,▼ button, and select the input position by pressing the ▶,◀ button.
(2) After pressing the "Recall" button, check that the indication of "AAAA" is the same as CH No. indication.
(3) Select the Channel ID mode again. Select "RESET" by pressing the ▲,▼ button and press the ▶ button.
(4) Check that the delete of "AAAA" when indicate the CH No., after press the "Recall" button.

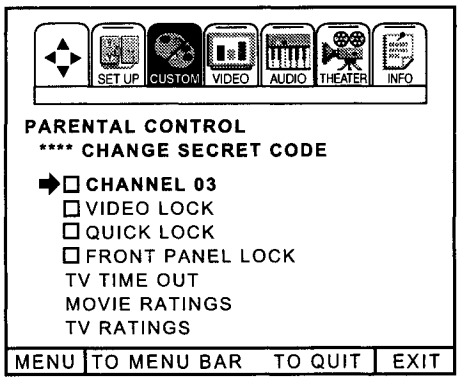
CUSTOM MENU



Adjustment Preparation
(3) Set to PARENTAL CONTROL mode, (CUSTOM MENU).

Adjustment Procedure
(1) Select PARENTAL CONTROL by ▶ button.
(2) Press "7" button 4 times. ("7777" is input.)
(3) Select CHANNEL mode, and set to on by ▶ button, check that the picture becomes pitch-dark, and sound does not come out.
(4) Set to PARENTAL CONTROL mode again.
(5) Select CHANNEL mode and set to off by ▶ button.
(6) Check that the picture and sound return to the previous condition.

CUSTOM MENU



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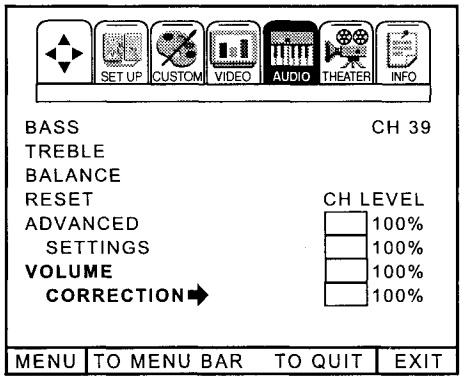
Adjustment Preparation

(4) Set VOLUME CORRECTION mode (AUDIO Menu).

Adjustment Procedure

(1) Select the registration point using ▲,▼ button and received channel no. is memorized by pressing number buttons.
Note: By key-in "0", "4," then 4CH can be memorized.

(2) Check that Volume level changes and sets 100%~50% (5% step) using ▲,▼ button.



2-7-3 PARENTAL CONTROL (V-Chip) operation check

Preparation for Adjustment

(1) Receive a channel with V-Chip signal.
(2) Push MENU and select CUSTOM menu by using ◀ or ▶ button.
(3) Select PARENTAL CONTROL by using ▲ or ▼ button.
(4) Press ▶ button to set PARENTAL CONTROL mode.
(5) Enter "7777" for SECRET CODE.
(6) Select MOVIE RATINGS and TV RATING by using ▲ or ▼ button.
(7) Press ▶ button to set MOVIE RATINGS and TV RATINGS.

Adjustment Procedure

(1) Select MOVIE RATINGS MPAA (PG) and TV RATINGS (TV-14/ALL BLOCK)
(2) Check that Picture & audio should be blocked as follows
"RATING BLOCKED" is displayed when picture is blocked.

Receipt Signal	TV-PG	MPAA PG	TV-Y7-FV
Picture/Audio Condition	UNBLOCK	BLOCK	UNBLOCK

(3) Select MOVIE RATINGS MPAA (PG-13) and TV RATINGS (TV-14/ALL BLOCK)
(4) Check that Picture & audio should be blocked as follows
"RATING BLOCKED" is displayed when picture is blocked.

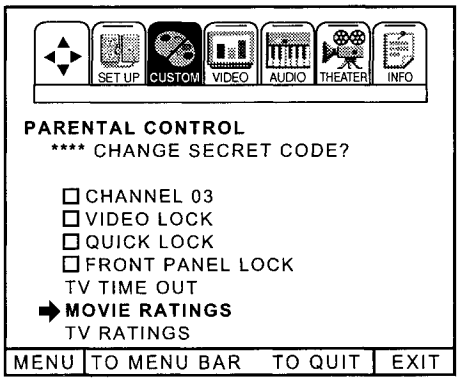
Receipt Signal	TV-PG	MPAA PG	TV-Y7-FV
Picture/Audio Condition	BLOCK	UNBLOCK	UNBLOCK

(5) Select MOVIE RATINGS MPAA (PG-13) and TV RATINGS (TV-Y7/ALL BLOCK)
(6) Check that Picture & audio should be blocked as follows
"RATING BLOCKED" is displayed when picture is blocked.

Receipt Signal	TV-PG	MPAA PG	TV-Y7-FV
Picture/Audio Condition	BLOCK	UNBLOCK	BLOCK

(7) Same check as (1) to (6) should be applie for PINP sub picture. Main picture should receive a channel without V-chip signal. Sub picture should receive a channel with V-chip signal.

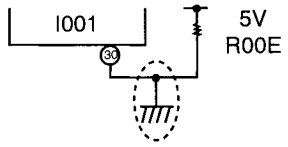
NOTE: User setting rating & receipt signal rating are displayed on top area of the screen when RECALL button is pressed.
1st line : User setting rating.
2nd line : Receipt signal rating.



2-7-4 Clock Mode (Clock Operation Check)

Adjustment Preparation

(1) Connect I001 (30) To GND as follows



Remarks: The addition of the above circuit intends to check the clock operation, with clock counting in 60 times mode.

(2) Set to CLOCK SET Menu (SET UP Menu).

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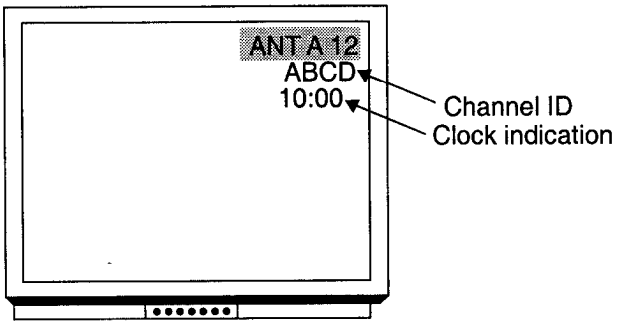
Adjustment Procedure

(1) After clock setting is done perform CH indication (Recall). Check that clock indication is displayed in addition to the CH indication, and that the clock indication is going by 1 second per minute.



2-7-5 Picture Mode

Adjustment Preparation

(1) Receive color bar signal.
(2) Press MENU key, and select VIDEO menu
(3) Set to CONTRAST mode.

Adjustment Procedure

(2) Check that Contrast is changed by pressing control ◀,▶ buttons.

Adjustment Preparation

(3) Set to BRIGHTNESS mode.

Adjustment Procedure

(3) Check that Brightness is changed by pressing control ◀,▶ buttons.

Adjustment Preparation

(4) Set to COLOR mode.

Adjustment Procedure

(4) Check that Color is changed by pressing control ◀,▶ buttons.

Adjustment Preparation

(5) Set to TINT mode.

Adjustment Procedure

(5) Check that Tint is changed by pressing control ◀,▶ buttons.

Adjustment Preparation

(6) Set to SHARPNESS mode.

Adjustment Procedure

(6) Check that Sharpness is changed by pressing control ◀,▶ buttons.

Adjustment Preparation

(7) Set to RESET mode.

Adjustment Procedure

(7) Check that all picture settings return to delivery settings by pressing ▶ button.

Adjustment Preparation

(8) Set to COLOR TEMPERATURE mode, (VIDEO, ADVANCED SETTINGS).

Adjustment Procedure

(8) Check that WHITE CONTROL is changed by pressing ▶ button.

Adjustment Preparation

(9) Set to AUTO COLOR mode, (VIDEO, ADVANCED SETTINGS).

Adjustment Preparation

(9) Check the Color changes by pressing ▶ button.

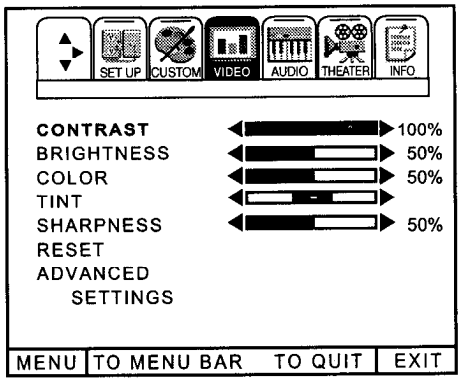
Adjustment Preparation

(10) Set to NOISE REDUCTION mode, (VIDEO, ADVANCED SETTINGS).

Adjustment Procedure

(10) Check that noise of the picture is reduced by setting NOISE REDUCTION on.

VIDEO MENU



2-7-6 Sound Mode

Adjustment Preparation

(1) Press MENU key, and select AUDIO menu.
(2) Set to BASS mode.

Adjustment Procedure

(1) Check that BASS is changed by pressing control ◀,▶ buttons.

Adjustment Preparation

(2) Set to TREBLE mode.

Adjustment Procedure

(2) Check that TREBLE is changed by pressing control ◀,▶ buttons.

Adjustment Preparation

(3) Set to BALANCE mode.

Adjustment Procedure

(3) Check that BALANCE is changed by pressing control ◀,▶ buttons.

Adjustment Preparation

(4) Set to RESET mode.

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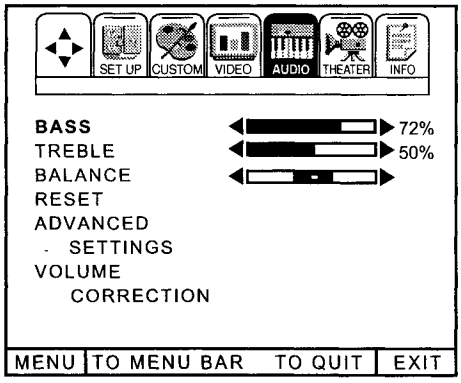
Adjustment Procedure

(4) Check that all sound setting modes return to delivery settings by pressing ▶ button.

AUDIO MENU



Adjustment Preparation

(5) a. Set "VOLUME" to step *10, set, "BASS" and "TREBLE" to center, when "LOUDNESS" is turned off. (AUDIO menu, ADVANCED SETTINGS).

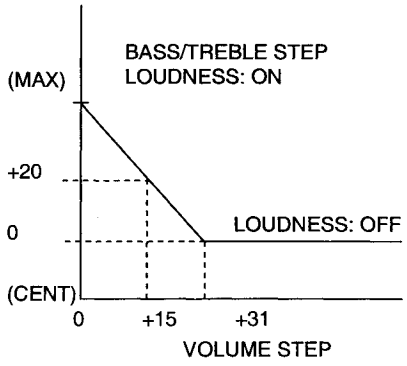
b. Set to LOUDNESS mode (AUDIO menu, ADVANCED SETTINGS).

Adjustment Procedure

(5) Check that "BASS" and "TREBLE" are changed as below table when "LOUDNESS" is turned on by pressing ◀,▶ button. Turn off LOUDNESS after check.

LOUDNESS	BASS	TREBLE
OFF	CENTER	
ON	+21 STEP	

(When volume set to 10)
After checking, set Loudness to Off.



*Note
According to Volume setting level, this function works as it is shown in the figure.

Adjustment Preparation

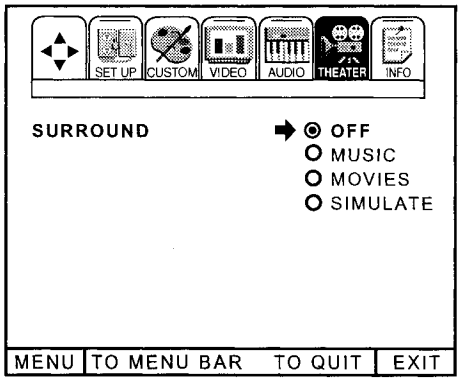
(6) a. Input stereo sound signal to VIDEO: 1 terminals, and set "VIDEO: 1" by Input button.

b. Set to SURROUND menu (THEATER menu):

Adjustment Procedure

(6) Check that sound becomes louder when set MUSIC or MOVIE mode by ▲,▼ button.

THEATER MENU



2-7-6 Auto Link Mode

Adjustment Preparation (AUTO mode)

(1) Set AUTO LINK mode (CUSTOM menu) to AUTO mode (set V1, V2, V3, all).

(2) Turn the TV Set off.

Adjustment Procedure

(1) Input Video Signal to VIDEO: 1 Input.
(2) Check that the TV set turns on with VIDEO: 1 mode.
(3) Turn the TV set off.
(4) Input Video Signal to S-IN:1 Input.
(5) Check that the TV set turns on with S-IN:1 mode.
(6) Turn the TV set off.
(7) Check same as above to VIDEO: 2, VIDEO: 3, S-IN2 and YC_BC_R Input.

Adjustment Preparation (REMOTE mode)

(1) Set AUTO LINK mode to REMOTE mode (V1, V2, V3 all).
(2) Turn the TV set off.

Adjustment Procedure

(1) Transfer Remo-con code to the set (except Power key).
(2) Input Video Signal to VIDEO: 1 within 5 seconds from (1).
(3) Check that set turns on with VIDEO: 1 mode.
(4) Turn the TV set off.
(5) Apply same check as (1) ~ (4) to VIDEO:2, VIDEO:3, SIN1, SIN:2, YC_BC_R Input.

Note 1: VIDEO:3 and Y-C_BC_R inputs are only available on **36/32UX59B** models.

Note 2: SIN:2 Input only available on **36/32UX59B** and **36/32FX49B** models.

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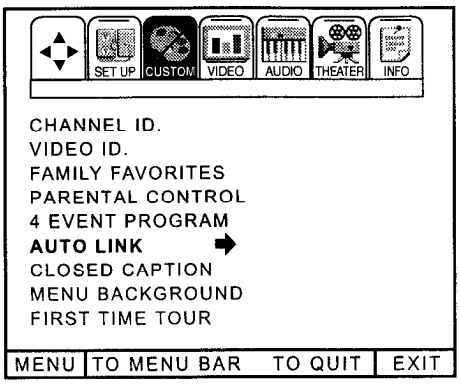
CUSTOM MENU



V. DEFLECTION CIRCUIT PICTURE ADJUSTMENT OPERATION CHECK

1. HIGH VOLTAGE LIMITER CIRCUIT OPERATION CHECK AND OVER VOLTAGE PROTECTION CIRCUIT OPERATION CHECK.

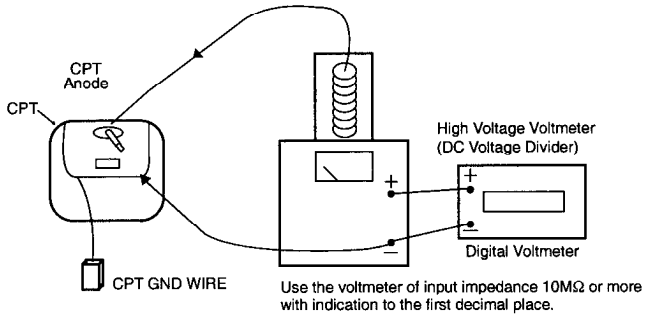
Adjustment Preparation

(1) Connect a high voltage voltmeter between CPT anode terminal (Anode cap side) and the ground as below.
(2) Set AC input voltage to 120±3V.
(3) Receive circle pattern and set "BRIGHTNESS" and "CONTRAST" to max.
Adjust Screen VR so that beam current is I_B±0.1mA. (The voltage of ABL terminal-C747 both ends should by 12V or less.)

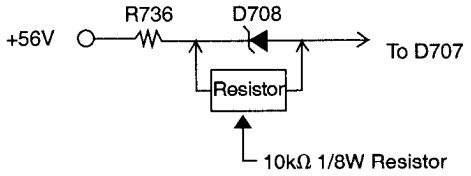
Adjustment Procedure

(1) Check that the normal high voltage and +B voltage as below.

CHASSIS	EHT±1KV	1_B±0.1mA	+B
CZ97,CZ95,CZ93	30.0±1KV	1.7±0.1mA	140±0.3V
CY97,CY95,CY93	29.0±1KV	1.5±0.1mA	140±0.3V



(2) Connect a 10kΩ 1/8W Resistor to both ends of D708 and check that power is turned off.



(3) Disconnect the AC plug and remove 10kΩ 1/8W Resistor.

2. FBT PROTECTION CIRCUIT OPERATION CHECK

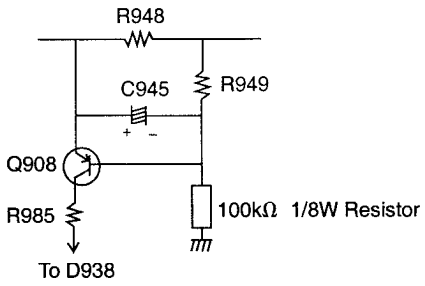
Adjustment Preparation

(1) Set "CONTRAST" to maximum, "BRIGHTNESS" to center.

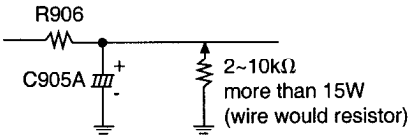
Adjustment Procedure

(1) Connect a 100Ω 1/8 Resistor between Q908 base and ground, check that picture disappears. See figure A.

Figure A



(2) Immediately after checking, disconnect the TV set power cord.
(3) Discharge C905A as follows.



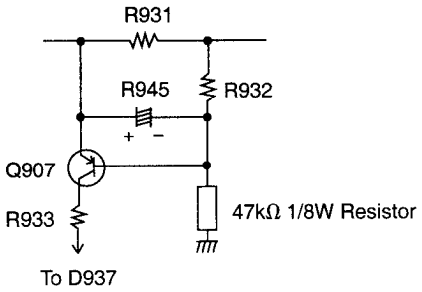
3. CHECK +18V SHORT PROTECTION CIRCUIT

Adjustment Preparation

(1) Set "CONTRAST" to maximum, and "BRIGHTNESS" to center.

Adjustment Procedure

(1) Connect a 47kΩ 1/8 W Resistor between Q907 base and ground, check that picture disappears.



(2) Immediately disconnect the TV set power cord.
(3) Discharge C905A as follows.

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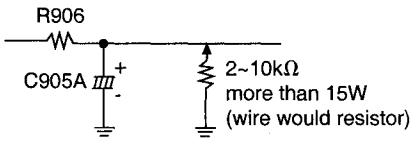


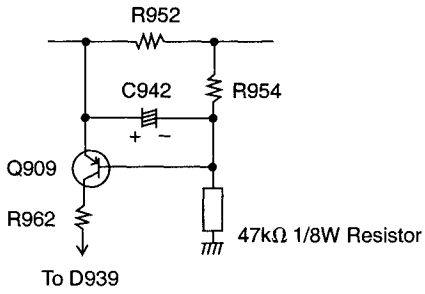
4. CHECK + 14V SHORT PROTECTION CIRCUIT.

Adjustment Preparation

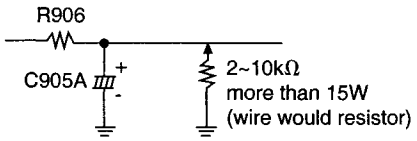
(1) Set "CONTRAST" to maximum and "BRIGHTNESS" to center.

Adjustment Procedure

(1) Connect a 47kΩ 1/8W Resistor between Q909 base and ground, check that picture disappears.



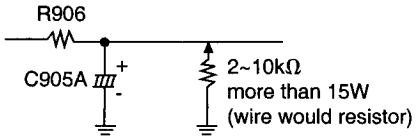
(2) Immediately disconnect the power cord.
(3) Discharge C905A as follows.



5. LOAD SHORT PROTECTION CIRCUIT OPERATION CHECK.

Adjustment Procedure

(1) Receive circle pattern signal.
(2) Set "CONTRAST" to maximum and "BRIGHTNESS" to center.
(3) After turning on the CTV set, confirm the DC voltage of D008, DOOF, D753 and D952, each cathode side. These voltages should be more than 1.5V.
(4) Short-circuit both ends of R961 and check that the picture disappears within 2~3 sec.
(5) Disconnect short-circuit of R961 and the TV set power cord.
(6) Discharge C905A as follows.



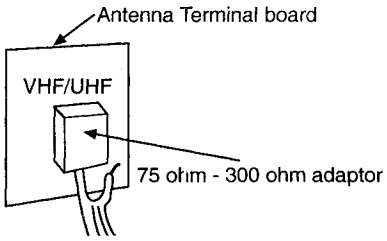
6. WEAK ELECTRIC FIELD CHECK

Adjustment Preparation

(1) Connect one side of the 300 ohm feeder to 75 ohm ~ 300 ohm antenna adapter. Connect the antenna adapter to the VHF antenna terminal board as shown below.
(2) Turn to no signal condition.

Adjustment Procedure

(1) Check that the phenomena such as oscillation and abnormal beat, etc. do not occur in all the channel.



VI. REMO-CON OPERATION CHECK

1. DIRECT CHANNEL SELECTION

Adjustment Procedure

(1) Input 2 or 3 digits of channel number with the buttons of the Remo-con "0-9." Check that the input number and the on-screen display number are the same. (At 100CH selection, press "1" and after 2 seconds, press "0" two times.

1 — → 1 — —
After 2 seconds

2. LST-CH (LAST CHANNEL RECALL)

Adjustment Procedure

(1) Check that the set receiver alternates between the channel which is being received and the channel which was previously received with each press of the "LST-CH" button of the Remo-con.

3. MUTE

Adjustment Procedure

(1) Check that the sound alternates between SOFT MUTE, MUTE and MUTE OFF by every pressing of "MUTE" button on the Remo-con. At this time, check the MUTE indication:

MUTE off	Yellow
SOFT MUTE	Magenta
MUTE	Magenta

(2) Check that sound level goes to 1/2 level at SOFT MUTE.
(3) Check that sound level goes to 0 at MUTE mode.

4. EXIT/RECALL/CS

Adjustment Procedure

(1) Check that on-screen channel no. indication and the COMMERCIAL SKIP Icon appears by pressing the "EXIT/RECALL/CS" button of the Remo-con.

5. P IN P

Adjustment Preparation

(1) Connect signal to ANT A and receive it.
(2) Connect signal to VIDEO: 1 Input.

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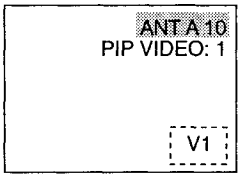
Adjustment Procedure

(1) Check that with each press of the "PIP" button of Remo-con, sub-picture alternates between On and Off. When sub-picture is On, check that the channel numbers are displayed as below.



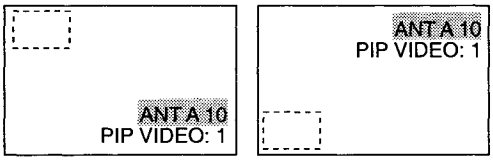
6. MOVE

Adjustment Preparation

(1) Press "PIP" button to set to PinP mode.

Adjustment Procedure

(1) Check that with each press of the "MOVE" button on Remo-con, sub-picture moves counterclockwise.
Note: When sub-picture is in the upper left of the screen, the channel number of main picture comes to the lower right, as shown below.



7. SWAP

Adjustment Preparation

(1) Press "PIP" button to set to PinP mode.

Adjustment Procedure

(1) Check that with each press of the "SWAP" button, the contents of main picture and sub-picture are exchanged.

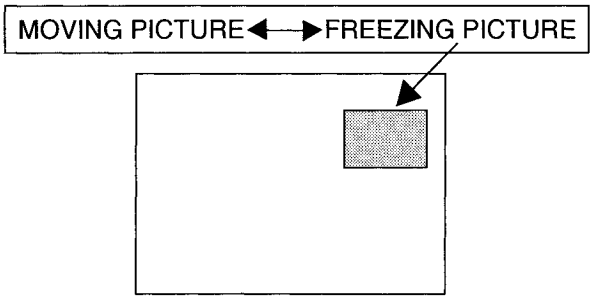
8. FREEZE

Adjustment Preparation

(1) Connect signal to ANT A and video. (One or both of the pictures should be moving picture.)
(2) Press "PIP" button to set PinP mode.
(3) Sub-picture should be moving picture.

Adjustment Procedure

(1) Check that with each press of the "FREEZE" button, sub-picture alternates between moving picture and freezing picture.



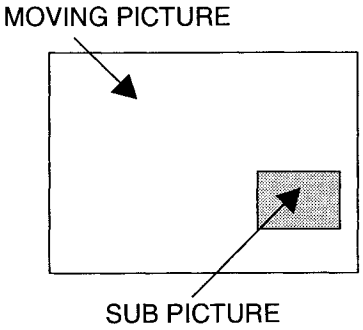
(2) Press "PIP" button to make sub-picture disappear.

Adjustment Preparation

(1) Connect signals to ANT A and Video Input. Both signals should be moving picture.
(2) Set PinP to off.

Adjustment Procedure

(1) Check that freezing picture of main screen appears as a sub-picture by pressing "FREEZE" button on the Remo-con.
(2) Check it also in the TV and Video modes.
(3) Check that the freezed sub-picture disappears by pressing "FREEZE" button.
(4) Check that the freezed sub-picture turns to normal PinP sub-picture by pressing PIP button.



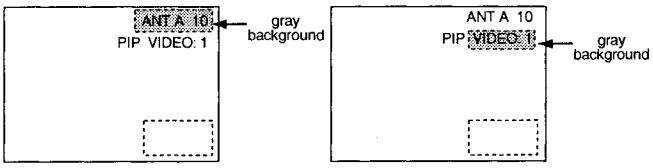
9. PINP CH (36/32UX59B and 36/32FX49B models).

Adjustment Preparation

(1) Connect the signal to ANT A and VIDEO: 1.
(2) Press "PIP" button to set PinP mode.

Adjustment Procedure

(1) Check that OSD changes as follows by pressing "PIP CH" button.



(Main mode) (PinP mode)

(2) Set PIP CH to PinP mode.
(3) Check that PinP sub-picture changes by channel ▲,▼, and "INPUT" key and receives normal picture.

Note: PIP CH Function not available for **36/32CX39B** models.

VII. MEMORY INITIALIZE (2)

After all of the adjustments of main chassis are finished, perform memory initialize. (Operation in Item III)

VIII. FINAL ASSEMBLY ADJUSTMENT/ COMMON SERVICE ADJUSTMENT

1. PURITY CONVERGENCE ADJUSTMENT

Note: For ITC type A90LPY30X01 apply item 1.2 (8) (Purity check). For A80LJF30X(W), apply item 1.1-1.2 (8).

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1-1 Adjustment Preparation

(1) Keep DY slicked to CPT funnel.
(2) Turn ON the set and receive cross-hatch signal (or circle pattern signal). Adjust the static convergence coarsely according to item (VI11, 1-4).
(3) Receive white pattern signal and adjust the white balance according to item 4-6.
(4) Set BRIGHTNESS control and CONTRAST control to maximum and apply heat-run to the set with circle pattern signal received for 40 min. or more.

1-2 Purity Adjustment

THIS ADJUSTMENT METHOD APPLIES TO THE PURITY ADJUSTMENT BY USING MICROSCOPE.

(1) Adjust coarsely White balance, Static convergence (center) and Focus.
(2) Receive circle pattern and heat-run more than T minutes with CONTRAST and BRIGHTNESS to maximum. Do not delete the raster nor vary the current before fixing the position of DY. Heat-run should be done with perfect raster. (DY and tilt should have been coarsely adjusted.)

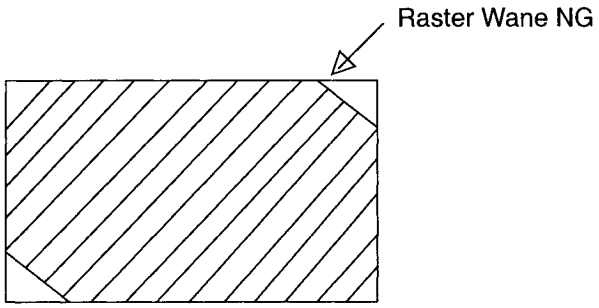


TABLE 1

CPT	T
A80LJF30X(W)	40 Min.

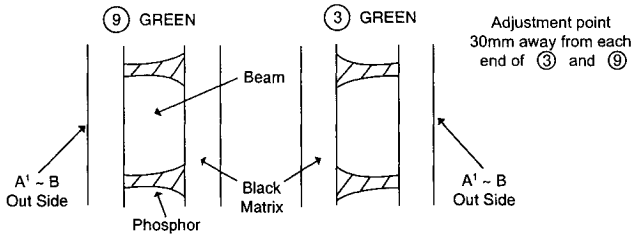
(3) The magnetic field in artificial magnetic field should follow the table below and the set should face as in Table 2. Degauss it from outside.

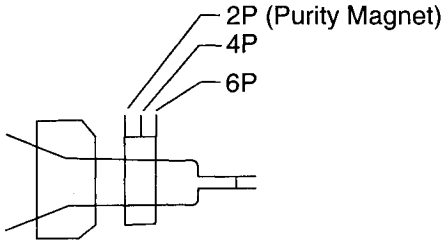
DESTINATION	VERTICAL FIELD	HORIZONTAL FIELD
USA	0.45G	0.3 G
CANADA	0.54G	0.15G
UNIVERSAL	0.35G	0.3 G
PANAMA, HAWAII	0.2 G	0.3 G

TABLE 2
Directions for adjustment

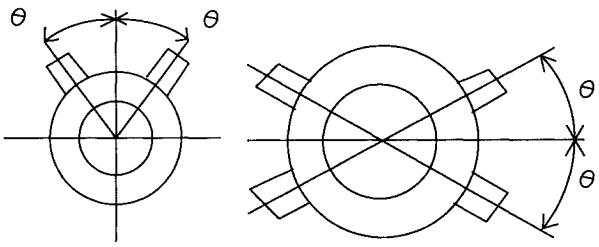
A80LJF30X(W)	North

(4) Adjust the position of purity magnet and DY. Keep the landing balance of ③ and ⑨, and adjust so that the landing of ③ and ⑨ is as follows while observing with a microscope.





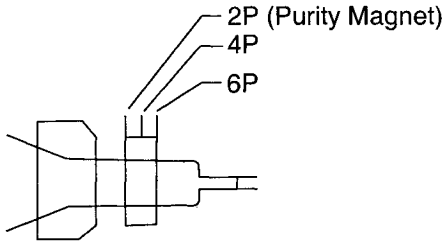
(a) Open the purity magnet as follows in order to move the raster only in the right-left direction.



C-F MAGNET P#2773671

C-F MAGNET P#2773672

Keep the balance of ③/⑨ DY landing



(b) YPB (Yoke pull-back) should be as follows. (Distance between the bumped position of DY toward the funnel and the just-landing position of ③ and ⑨.)

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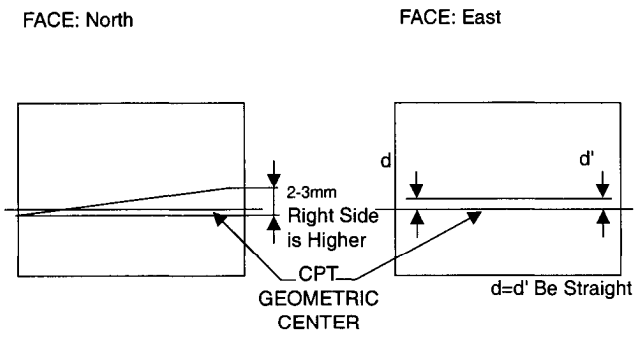
(c) DY tilt should be as follows.



(5) Fix DY with fixing torque of 14kg.cm.
Control the torque by an electric driver.
(6) If any miss landing occurs, correct with magnets.
If any wane of 10μ or so, judge by white unevenness. At this time, if the white unevenness is all right, any magnet is not needed.
(7) After peripheral convergence is adjusted, check the position of DY and tighten the DY again. (14kg.cm)
(8) Purity check
The magnetic field in artificial magnetic field should follow the magnetic field according to the destination, and the set should face as follows.
After degaussing in each direction, check these items visually and with a microscope.
(a) No problem in white unevenness.
(b) Each single color must not hit any other colors.
(c) If white or each single color is defective, apply a magnet(s) on CPT for correction.
If any magnet is applied, check it after degaussing.

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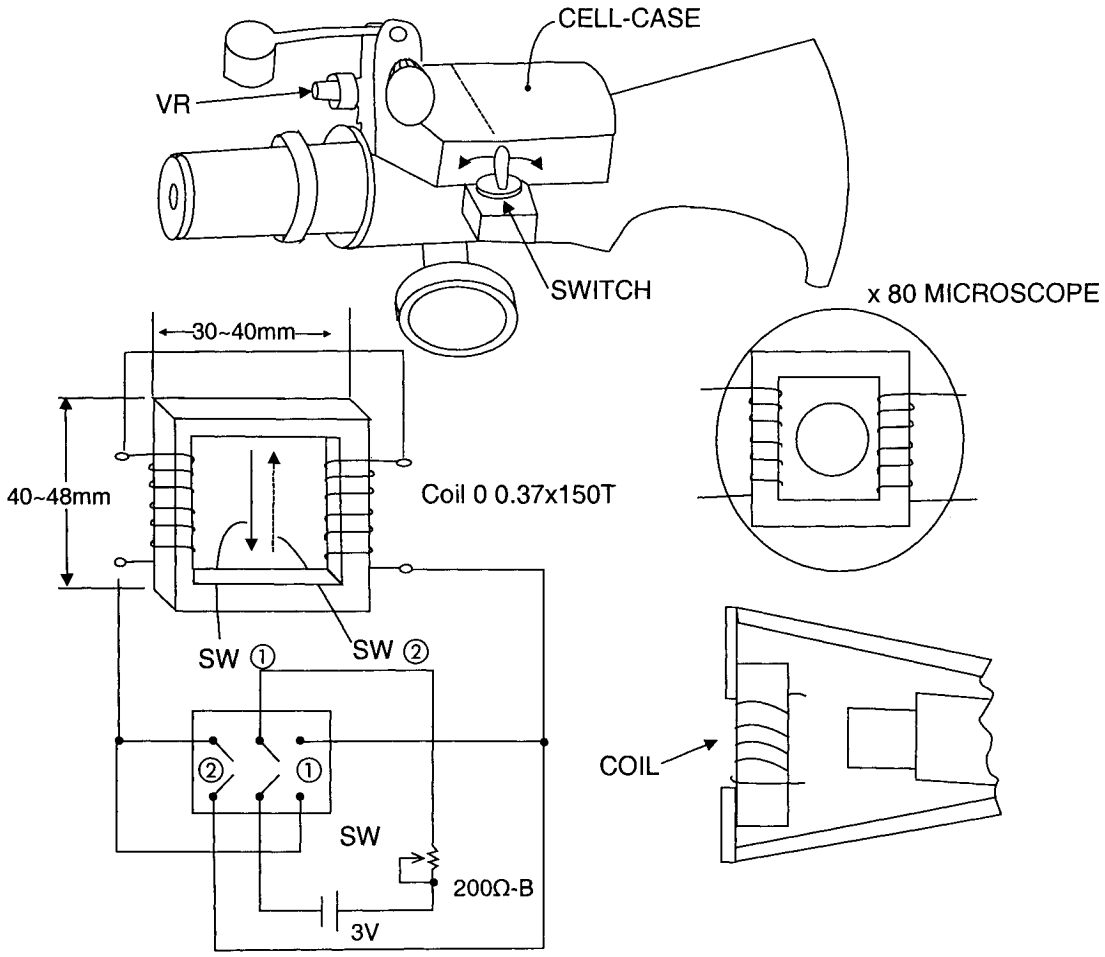
Reference

THE MICROSCOPE



Fix coil to CRT side of microscope. Set it upside down and measure it. Check that beam moves to the right and left equally in quantity. Be careful at assembly that core does not tilt because upward (downward) magnetic field by coil moves the beam to the right (left) or type MS-50X microscope of KANSAI DENKI.

1-3 Purity Adjustment
(This adjustment method applies to purity adjustment by hand operation.)

(1) Use an artificial magnetic field and set the field strength as follows.
*Magnetic field in CPT axis direction: 0 Gauss
*Magnetic field which is vertical to CPT axis:
U.S.A., Hawaii, Panama, Guam
Bolivia, Peru, Universal.....0.3 Gauss
Canada.....0.15 Gauss
Taiwan.....0.37 Gauss
(The direction of the magnetic field should be from the left side to the right side of the CPT screen as you face it.)

(2) Adjust Focus coarsely according to item 2.

(3) Adjust Convergence coarsely according to item 1-4 and 1-5.

(4) Receive Circle Pattern signal and check that Contrast and Brightness are maximum.

(5) Receive magenta signal. When the magenta signal is not available, short-circuit between the base and emitter of Q855 and set to magenta.

(6) Press DY fully against CPT funnel and turn the purity magnet so that the vertical magenta band comes to the center of the picture (Fig. 1-3-1). Check that color unevenness of both sides are approximately equal at this time. The openings of the purity magnet should be symmetric (Fig. 1-3-2).

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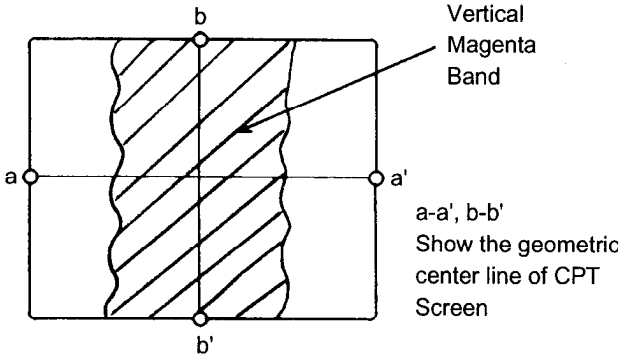
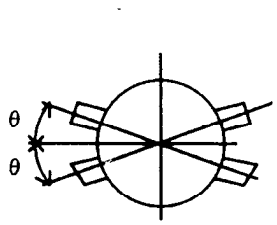
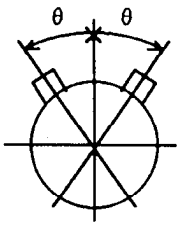




C-F MAG P#2773672



C-F MAGNET
P#2773671

The openings of the purity magnet should be symmetric: on the right and left sides (P#2773671) on the upper and lower sides (P#2773672)

FIGURE 1-3-2

(7) Receive the single red signal. When the single red signal is not available, short circuit between the base and emitter of Q845, and between the base and emitter of Q857 and set to single red.

(8) Pull back DY gradually and when the color unevenness of both sides of the picture disappear, mark the rear edge position of DY on the tape wound around CPT neck as shown in Figure 1-3-3. Pull back DY further and just before the color unevenness of both sides of the picture disappear, mark the rear edge position of DY on the tape in the same way. At this time, pull back DY so that the center axis of DY and CPT axis match.

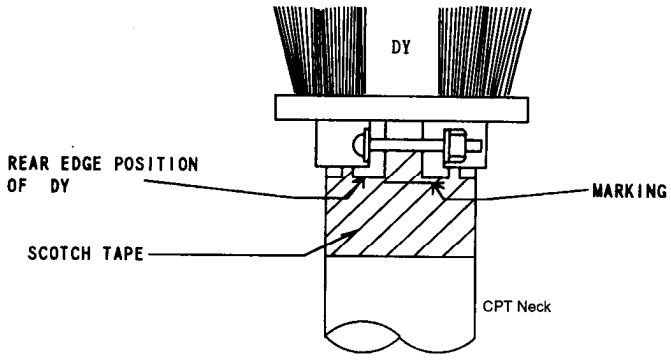
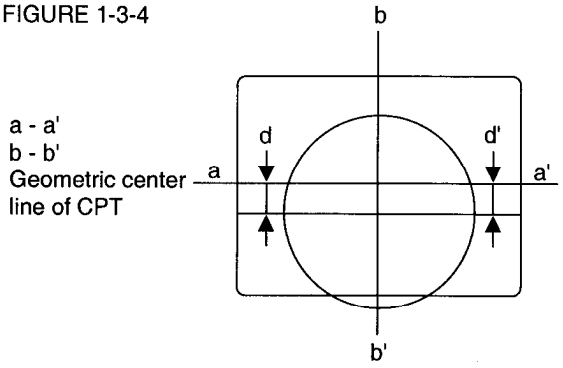


FIGURE 1-3-3

(9) Move DY so that the rear edge position of DY comes to the center of the two marked lines and fasten DY as d=d' (Figure 1-3-4). Further insert the rubber wedge between DY and CPT funnel from the top and raise DY backwards.

FIGURE 1-3-4



(10) Set CPT axis direction magnetic field of the artificial magnetic field according to the artificial magnetic field setting list classified by destination. (The direction of the magnetic field should be from the CPT screen side to the neck side.)

(11) After degaussing it from outside, check the purity in each color to R, G and B visually. Then, turn the screen to white and check the landing at the screen position shown in Fig. 1-3-5 with a microscope.

Criteria with microscope

There should be no miss landing at positions 2, 4, 8 and 10. Green beam should be at center of the green phosphor at position C. (Refer to the miss landing criteria.)

(12) Turn over the direction of CPT axis direction magnetic field of the next artificial magnetic field and check it by the same way as item (11). The positions of miss landing criteria with a microscope should be 2, 4, 8 and 10 (Figure 1-3-5).

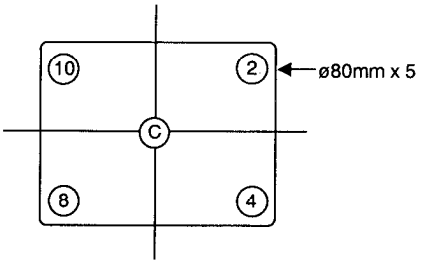


FIGURE 1-3-5

Miss landing criteria

The following conditions are defined as miss landing. Each color beams shines on the phosphor of the applied color and there are phosphor parts which are not luminous (shaded parts in

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the right figure) between the luminous parts and black matrix. Or, each color beam shines on the phosphor of not applied color.

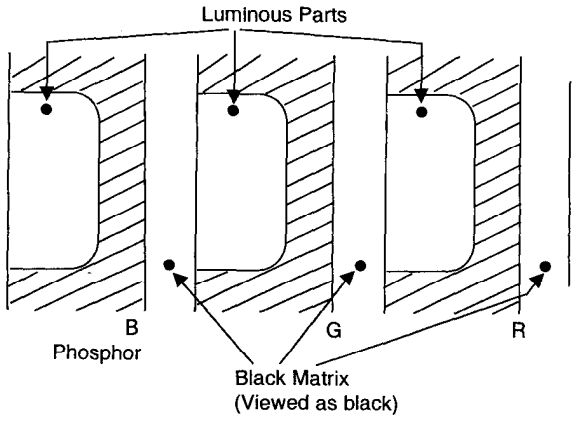


FIGURE 1-3-6 Enlarged view of screen with microscope

(13) To improve the miss landing mentioned above, *it's acceptable to stick the permanent magnet to* CPT funnel (Figures 1-3-7 and 1-3-8).

Usage

Apply a silicone rubber KE-40 WRTV to the permanent magnet shown in the Figure, adhere it to the CPT funnel and then fix it with permaseal tape P212.

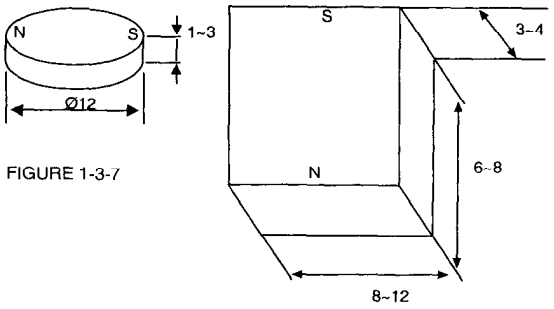
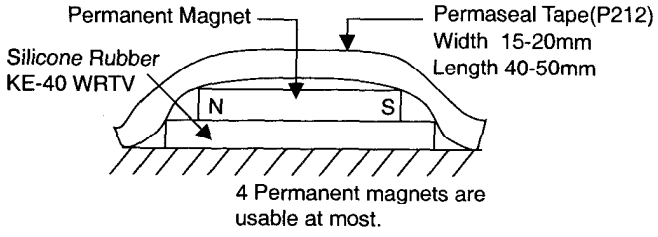


FIGURE 1-3-7



(14) Final purity criteria should satisfy the miss landing criteria.

(15) When delivering the sets, set CPT axis direction magnetic field to 0 Gauss and degauss it from outside.

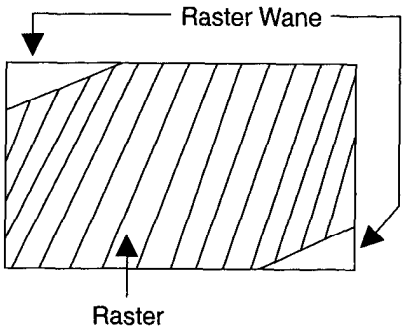
Table 3

Artificial magnetic field setting list classified by destination.

DESTINATION	Vertical Field	Horizontal Field
USA	0.45 G	0.3 G
CANADA	0.54 G	0.15 G
UNIVERSAL	0.35 G	0.3 G
PANAMA, HAWAII	0.2 G	0.3 G
TAIWAN	0.22 G	0.37 G

Notes for pre-heat

Before pre-heating, stick DY to CPT funnel and fix it so that the raster is perfect.



If the raster is imperfect like the left figure, CPT neck is in danger of cracking because the beam may hit it.

1-4 Static Convergence Adjustment (Screen center part) (Except ITC CPT)

(1) Receive a cross-hatch signal and set Brightness to the center and Contrast to minimum.

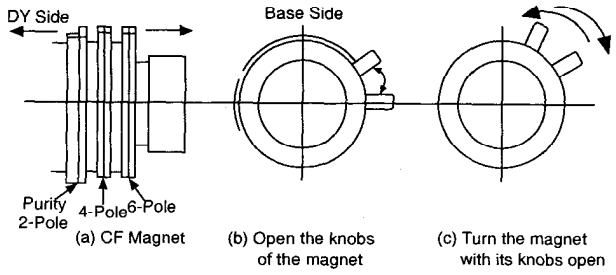


FIGURE 1-4-1

(2) Open the knobs of 4-pole magnet (2 sheets) (Figure 1-4-1(b)) and match the blue/red vertical lines at the center of the screen as shown in Figure 1-4-2(a).

(3) Turn the 4-pole magnet with its knobs open (Figure 1-4-1(c)) and match the blue/red horizontal lines as shown in Figure 1-4-2(b).

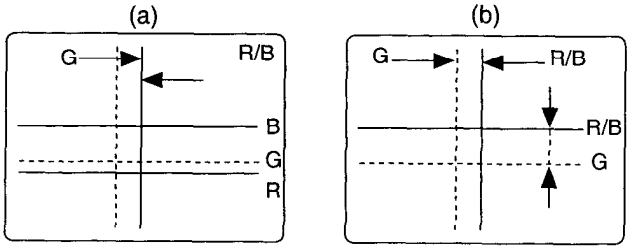


FIGURE 1-4-2

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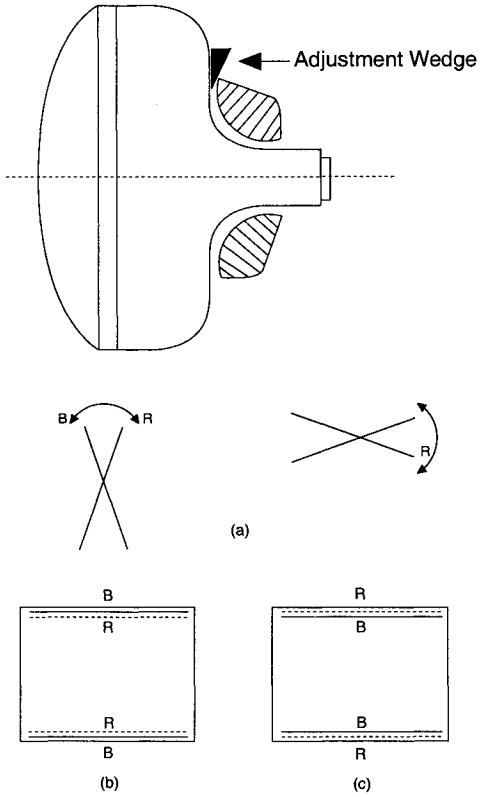
1-5 Dynamic Convergence adjustment (Except ITC CPT type)

(1) Insert an adjustment wedge (temporary) between the top of DY opening and CPT funnel as shown in Figure 1-5-1. By inserting the wedge gradually, match the red and blue vertical lines at the top and bottom of the screen and also match the red and blue horizontal lines of both sides of the screen as shown in Fig. 1-5-2(a).

(2) Adjust by swinging in the right/left directions of DY while observing 6 and 12 horizontal lines of the screen and match the red and blue horizontal lines. As shown in Fig. 1-5-2(b), when the blue is outside from the red on CPT screen, insert the DY fixing wedge between the right-side DY viewed from the rear of CPT and CPT funnel.

(3) As shown in Fig. 1-5-2(c), when the blue is inside from the red on CPT screen, insert the wedge between the left-side DY and CPT funnel.

(4) Insert two DY fixing wedge with approximately 120 to the fixing wedge inserted in item (2) or (3) and remove the adjustment wedge (temporary). Use the DY fixing wedge after peeling off the tape. After proper location, press and adhere it to the funnel.



2. FOCUS ADJUSTMENT

NO.	MODEL	CPT	CONDITION	Focus VR setting position
1	32UX59B 32FX59B 32CX39B	A80LJF30X (W) (HED-US)	• Receive a cross-hatch signal • Contrast control: Maximum • Sharpness control: Center • Brightness control: Where the background is set	Turn the Focus VR gradually clockwise from the full counterclockwise. Then set it to the point where the focus of 6th vertical line from the screen center becomes best.
2	36UX59B 36FX49B 36CX49B	A90LPY30X01 (HED-US)	• Same as above	Turn the Focus VR gradually clockwise from the full counterclockwise. Then set it to the point where the focus of 7th horizontal line from the screen center becomes best.

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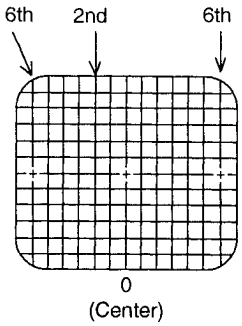

IX. MATCHING CHECK WITH OTHER INSTRUMENTS

1. VIDEO:1 INPUT TERMINAL MATCHING CHECK

Adjustment Preparation

(1) Input the video signal to VIDEO 1 IN terminal. The video signal level should be within 1±0.2 Vp-p (75 ohm termination) with 100% white signal at this time.

(2) Input the audio signal to the AUDIO 1 IN terminal. The audio signal should be 500m±20m Vrms at this time. (Connect VCR or TV tuner.)

(3) Connect an audio AMP to the AUDIO OUT terminals. (Or connect AUDIO IN terminals of a standard monitor instead.)

Adjustment Procedure

(1) Check that the set receives signal then select the Input mode by pressing the INPUT (FUNCTION) button of front panel of the set or remote control.

(2) When external input is performed, the video and audio should not be abnormal.
The 100% white signal that RF input receives should be as bright as the video signal 1Vp-p (75 ohm termination).
As for the sound, when the 100% modulation that RF input receives is 25KHZ, DIV., the sound level should be as much as external audio signal (500 Vrms) level.

(3) Refer to the next item (IV, 2-2).

2. VIDEO 2 INPUT TERMINAL MATCHING CHECK

Adjustment Preparation

(1) Same as 1 (1).

Adjustment Procedure

(1) Check that the set receives signal at INPUT 2 mode.

3. VIDEO:3 INPUT TERMINAL MATCHING CHECK (36/32UX59B MODELS)

Adjustment Preparation

(1) Same as1 (1)

Adjustment Procedure

(1) Check that the set receives signal at INPUT 3 mode.

4. SIN:1 INPUT TERMINAL MATCHING CHECK

Adjustment Preparation

(1) Connect the video/chroma signal to SIN:1 terminal.

(2) Connect the sound signal to AUDIO:1 input terminals.

Adjustment Procedure

(1) Check that the set receives S-Video signal at INPUT 1 mode.

5. SIN:2 INPUT TERMINAL MATCHING CHECK (36/32UX59B AND 36/32FX49B MODELS)

Adjustment Preparation

(1) Connect the video/chroma signal to SIN:2 terminal.

(2) Connect the sound signal to AUDIO:2 input terminals.

Adjustment Procedure

(1) Check that the set receives S-Video signal at INPUT 2 mode.

6. COMPONENT INPUT CHECK (36/32UX59B MODELS)

Adjustment Preparation

(1) Connect the component signal to component terminals.

(2) Connect the sound signal to AUDIO:2 input terminals.

Adjustment Procedure

(1) Check that the set receives component signal at INPUT 2 mode.

(2) Check that Recall OSD shows "Y-C_BC_R"

7. AUDIO OUT LEVEL CHECK

Adjustment Preparation

(1) Input the same audio signal at item 1(2) to AUDIO IN terminal (L). At this time, connect nothing to R terminal.

(2) Input the same audio signal as item 1(2) to AUDIO:1 IN terminal (R). At this time, connect nothing to L terminal.

(3) Check that the normal sound is output from both sides of the speakers when signal in item (1) is input.

(4) Check that the normal sound is output from only the right (R) speaker when signal in item (2) is input.

Adjustment Procedure

(1) Check that the audio output of AUDIO AMP connected to AUDIO HiFi OUT terminal changes according to the "VOLUME" of the set.

(2) Confirm that the output level of item (1) should be 1 Vrms (2.8 Vp-p)±20%. (Above level is equivalent to VOL. MAX. 100% modulated signal input.)

X. SAFETY CHECK

1. POLARITY CHECK

This check is performed according to UL standard requirement. There should be electricity between AC Power Cord and Chassis Earth.

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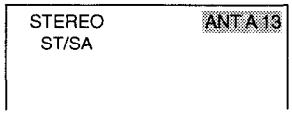
XI. MTS OPERATION CHECK

1. STEREO/SA BROADCAST RECEIVING CHECK

Adjustment Preparation

(1) Set the TV set so that a MTS broadcast (STEREO/SAP) can be received.



(2) Set MTS mode to STEREO or SAP mode.
Note: To select between "STEREO/SAP," display sound setting of MTS mode and Select AUDIO MENU (ADVANCED SETTINGS).

(3) Set BALANCE to the center.

Adjustment Procedure

(1) When one of the MTS broadcast stereo SAP is received, check that "ST" or "SA" is displayed on the screen.

(2) Stereo broadcast receiving check
- (a) Select MTS mode and press cursor ▶ button to display "STEREO" on the screen.
- (b) When only Lch signal is received, Lch sound comes out from the left speaker.
- (c) When only Rch signal is received, Rch sound comes out from the right speaker.
- (d) When monaural signal is received, monaural sound comes out from both the right and left speakers.

(3) SAP broadcast receiving check
- (a) Select MTS mode. Press cursor ▶ button to display "SAP" on screen.
- (b) SAP signal comes out from both of the right and left speakers.
- (c) When to SAP signal, the sound on "MAIN" side (refer to (3)) comes out.

Note: When the EXIT/RECALL/CS button is operated, "STEREO", "ST" or "SA" are shown for approx. for 4 sec.

2. MTS MODE CHECK

Adjustment Preparation

(1) Set the TV set so that a MTS broadcast (STEREO/SAP) can be received.

(2) Set BALANCE to the center.

Adjustment Procedure

(1) When "MTS MODE" is set to "MONO" mode, check that STEREO indication which has been ON are turned OFF and that monaural sound comes out from the right and left speakers.

(2) When "MTS MODE" is set to "STEREO" mode, check that STEREO indication which has been OFF are turned ON and that STEREO and SA sound can be received.

3. STEREO SEPARATION CHECK

Adjustment Preparation

(1) Set the set so that a MTS broadcast (STEREO/SA) can be received.

(2) Make surround "OFF".

(3) Set MTS MODE to "STEREO."

(4) Connect AUDIO OUT terminals L and R to an oscilloscope.

Adjustment Procedure

(1) When stereo L only signal (or R only signal) is received, check that the output level ratio of Lch and Rch is 15dB or more.

(Example)
When L only is received (100% modulation)

CH	Output Level
L	1.2 Vpp
R	0.21 Vpp or less

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XII. SETTING FOR DELIVERY

NAME	SPECIFICATION
SIGNAL SOURCE	ANTENNA ANT A / ANT B*
RECEPTION CHANNEL	03 CH
SOUND VOLUME (VOL.)	"10" ON-SCREEN DISPLAY
INPUT SELECT	TV MODE (ANT A)
CONTRAST	MAX
COLOR	CENTER VALUE
TINT	SAME AS ABOVE
BRIGHT	SAME AS ABOVE
SHARPNESS	SAME AS ABOVE
COLOR TEMP.	COOL
BALANCE	CENTER VALUE
BASS	SAME AS ABOVE
TREBLE	SAME AS ABOVE
MTS MODE	STEREO
SURROUND	OFF
LOUDNESS	OFF
DYNAMIC BASS **	OFF
VOLUME CORRECTION	NO SETTING
AUTO NOISE CANCEL	OFF
INT. SP	ON
P in P CH	TV (03) OFF
CLOSED CAPTION	OFF
CLOSED CAPTION MODE	C.C.
CLOSED CAPTION CHANNEL	1
P in P POSITION	RIGHT BOTTOM
MENU LANGUAGE	ENGLISH
CHANNEL ID	NO SETTING
FAMILY FAVORITES	NO SETTING
PARENTAL CONTROL	NO INSTALL (KEY No.:0000)
CLOCK SET	NO INSTALL (00:00 AM JAN 01 1999)
4 EVENT PROGRAM	NO SETTING
CHANNEL MEMORY	03~13CH
SP EVENT REMINDER	NO SETTING
AUTO LINK	OFF (ALL MODE)
VIDEO ID	NO SETTING
PLUG & PLAY	(ALL PAGE)
MENU BACKGROUND	GRAY
NOISE REDUCTION	OFF
AUTO COLOR	OFF

* **36/32UX59B** and **36/32FX49B** models.

** **36/32UX59B** models.

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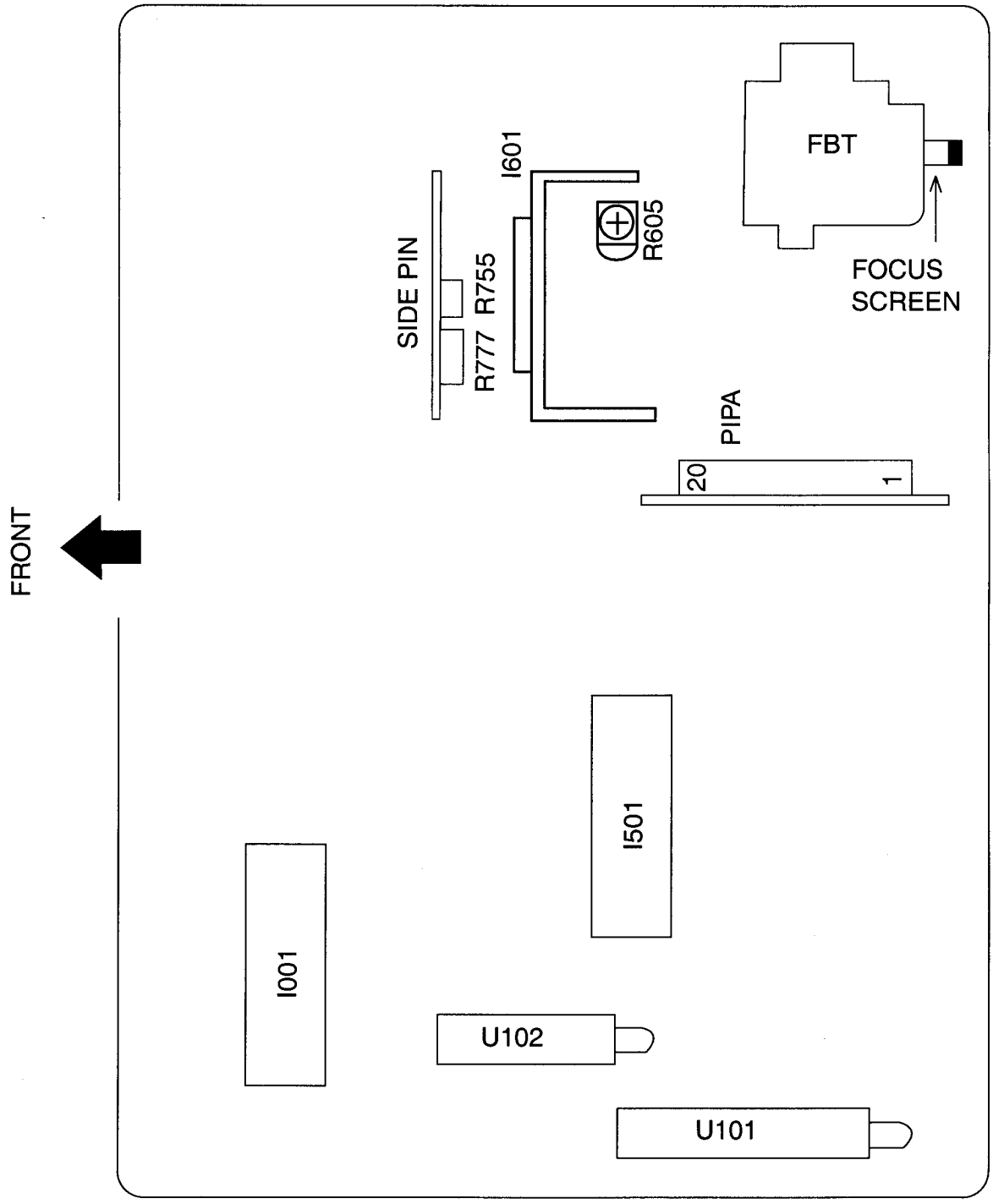
XIII. ADJUSTMENT POSITION LIST

1. M9LXU CHASSIS



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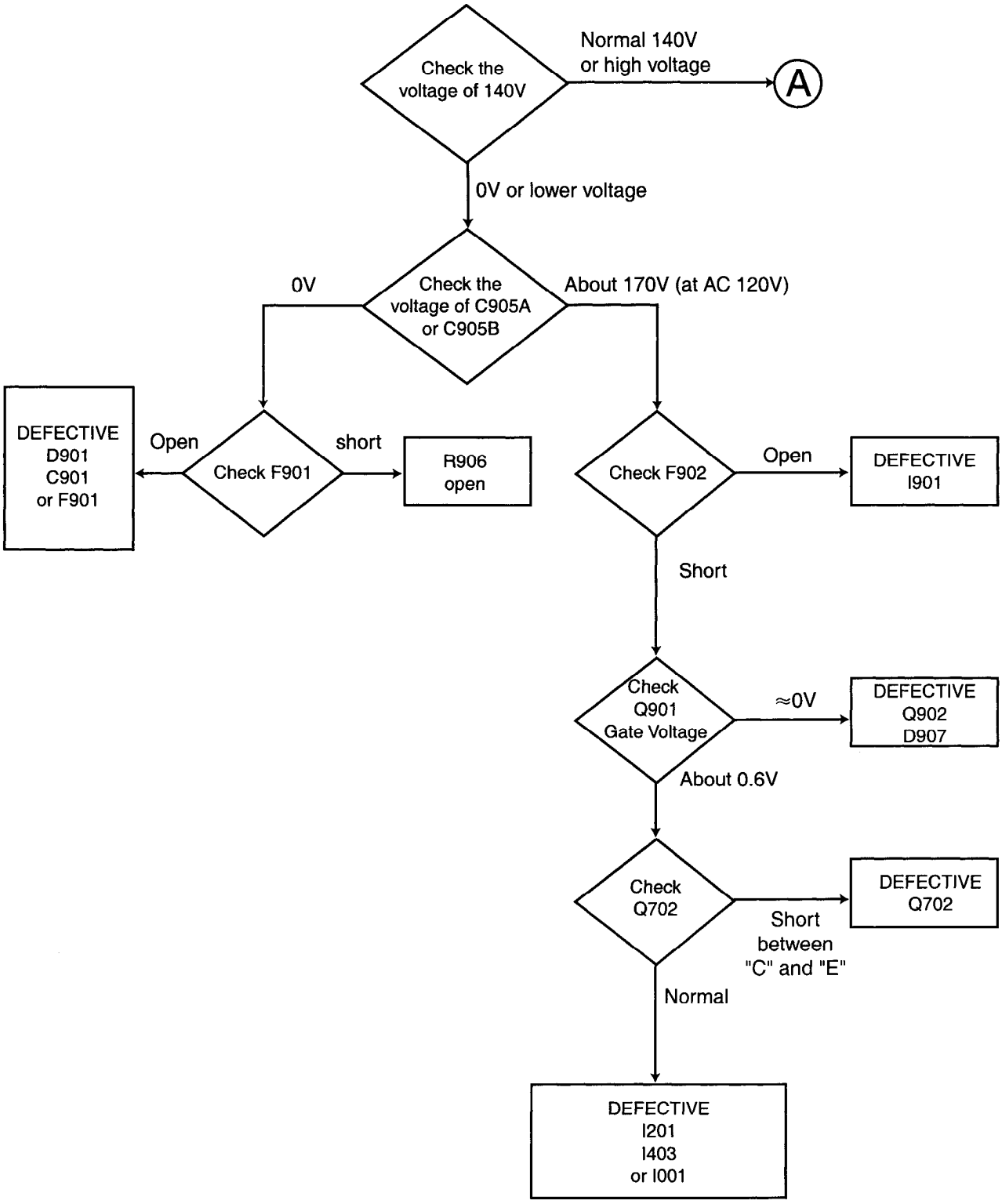
TROUBLE SHOOTING

① NO RASTER AND SOUND



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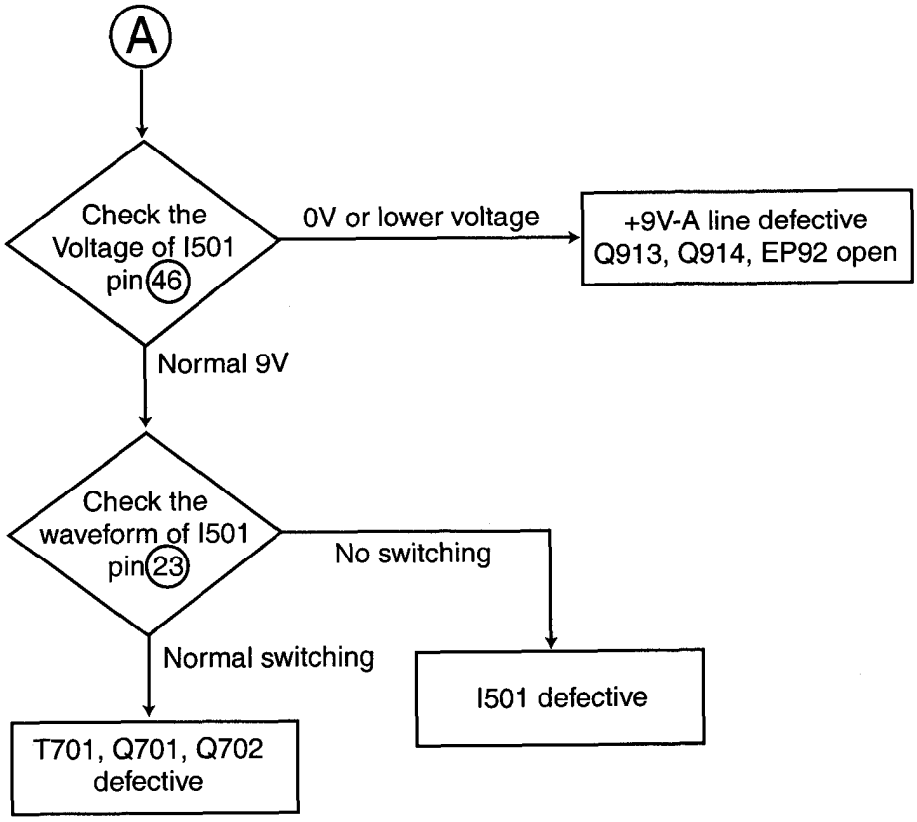
TROUBLE SHOOTING



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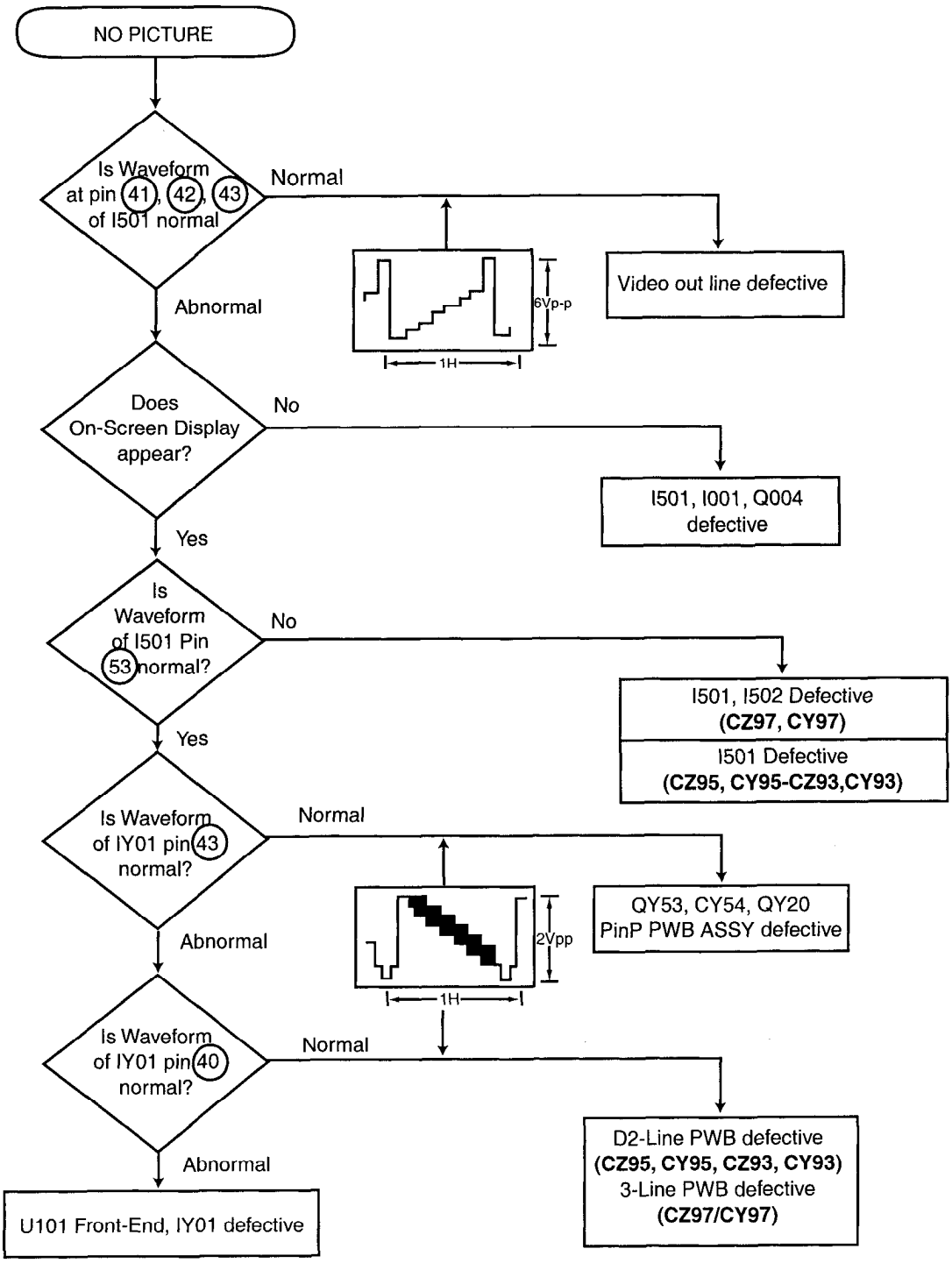
TROUBLE SHOOTING

② NO PICTURE



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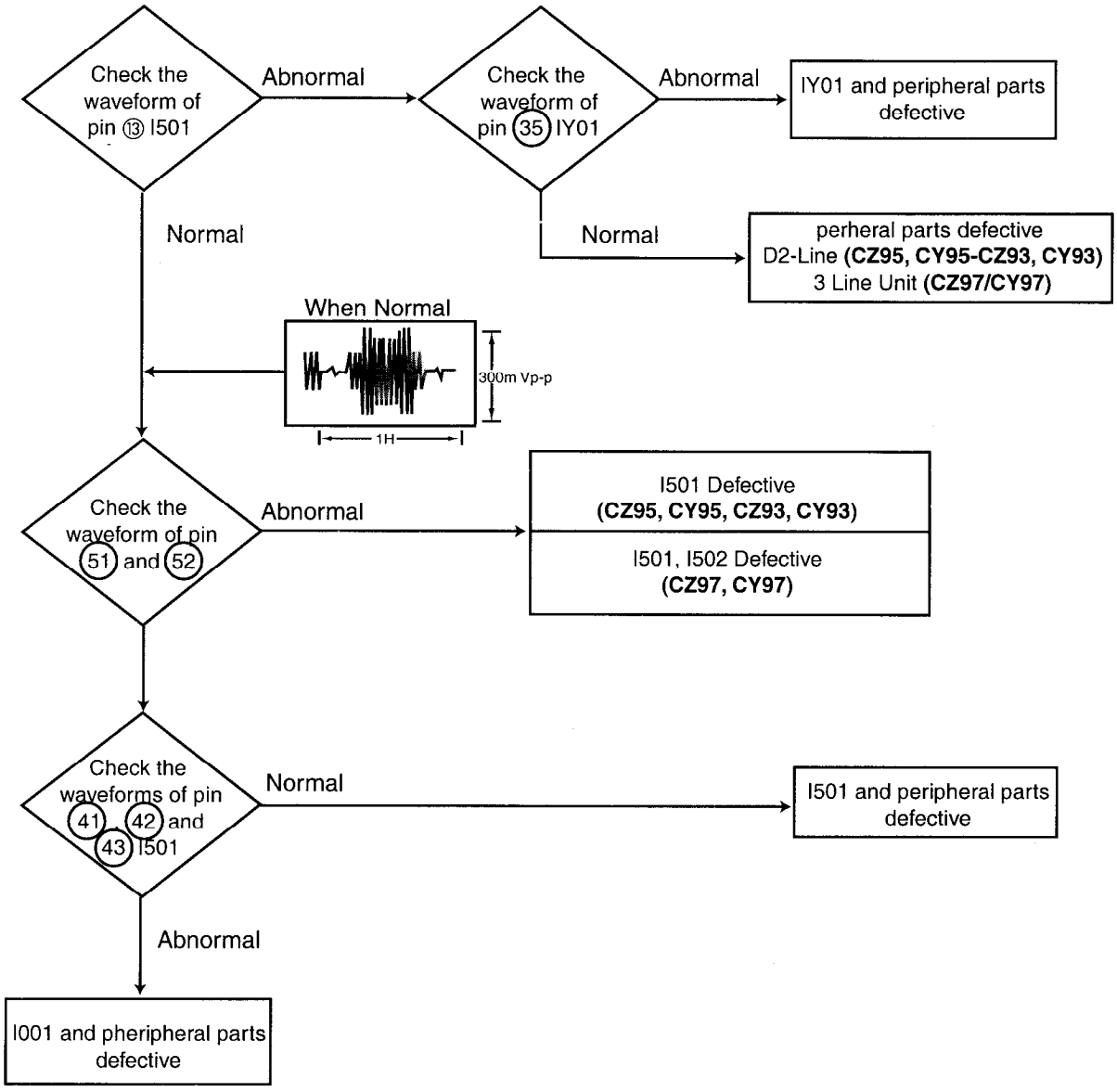
TROUBLE SHOOTING

③ NO COLOR



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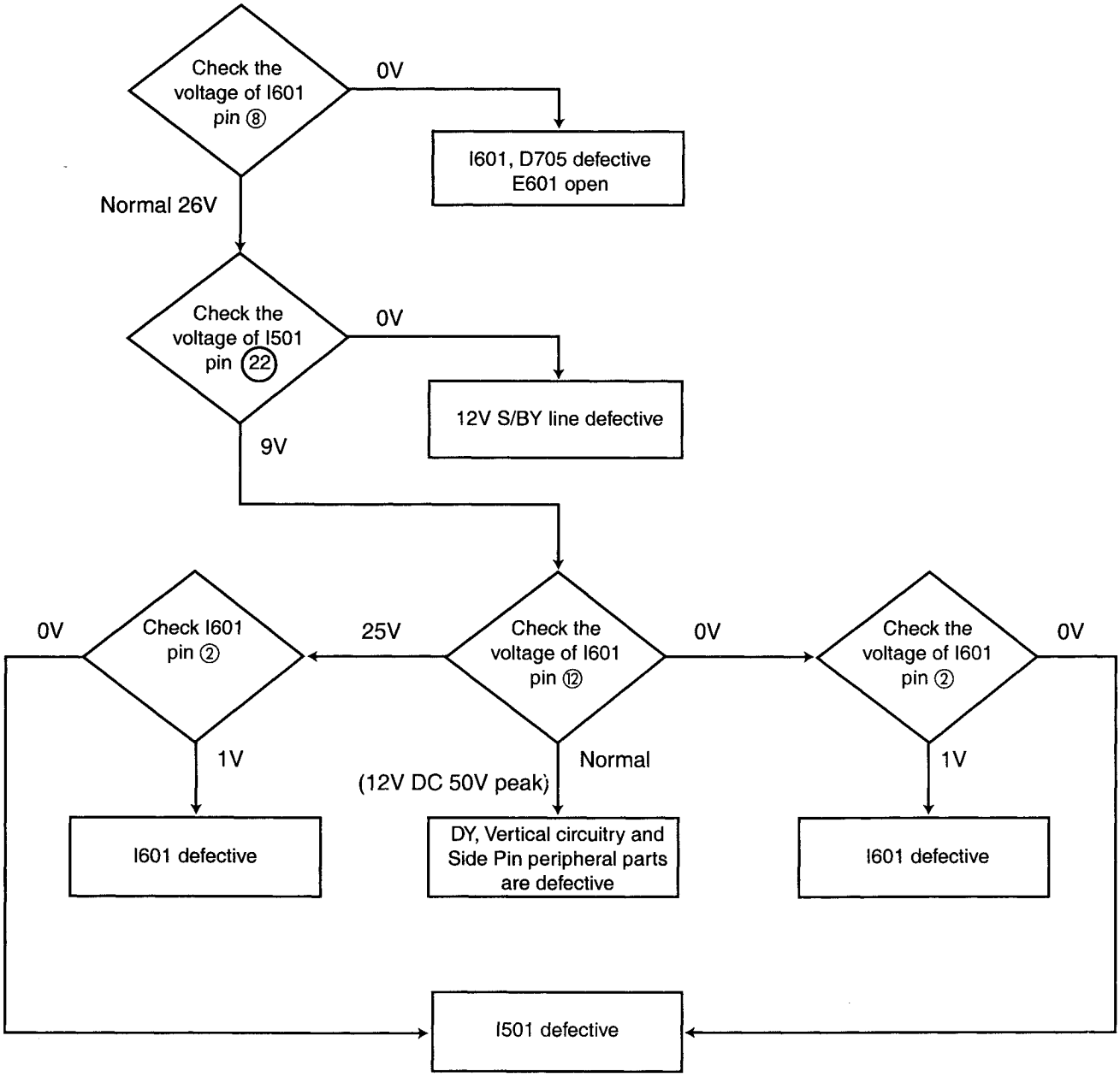
TROUBLE SHOOTING

④ NO VERTICAL DEFECTION OR V. SIZE IS DISTORTED



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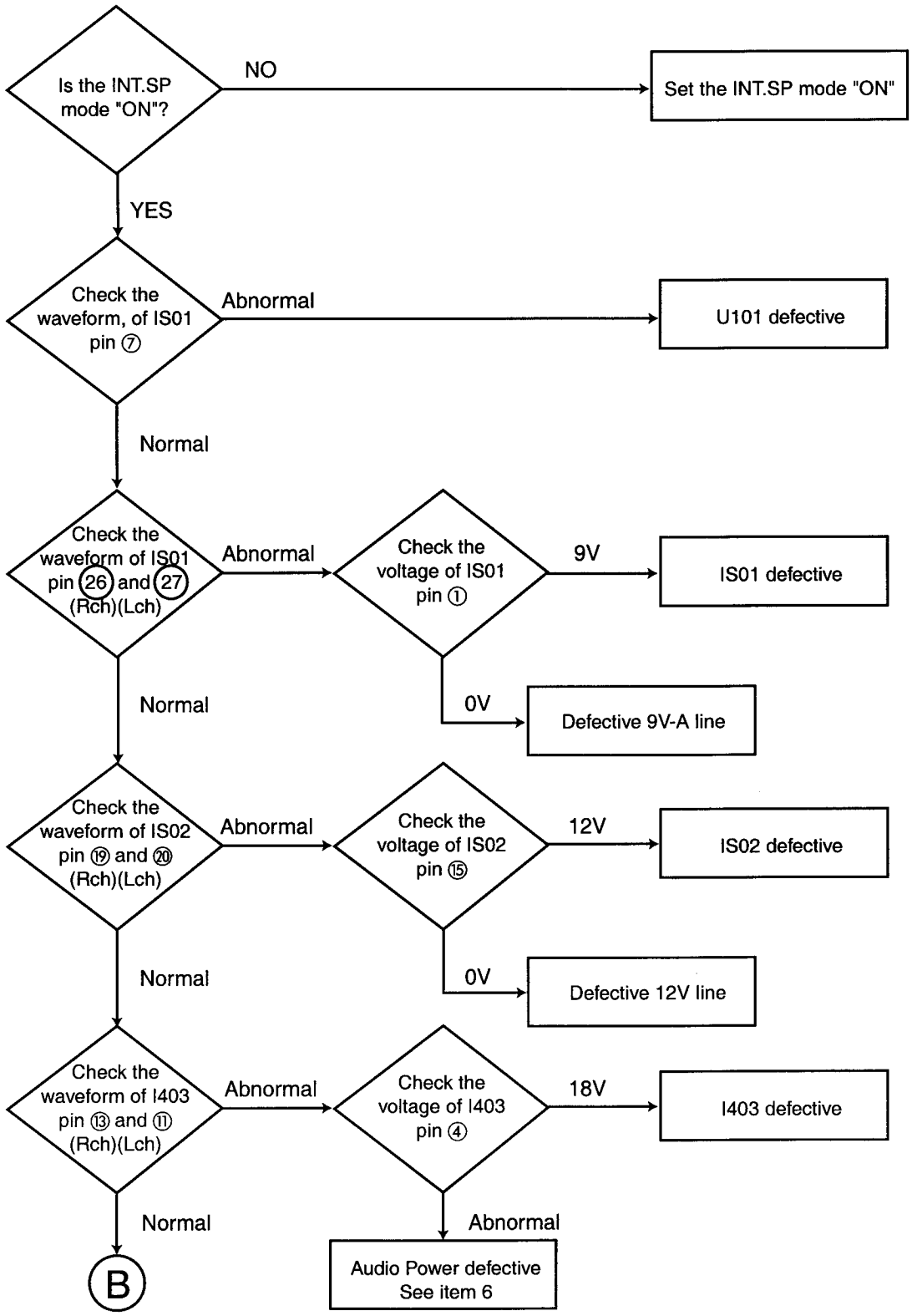
TROUBLE SHOOTING

⑤ NO SOUND



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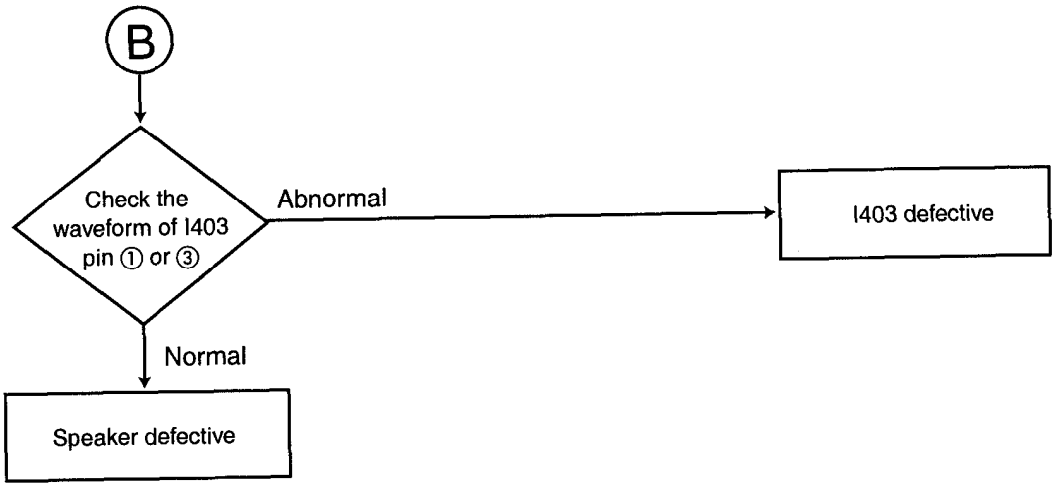
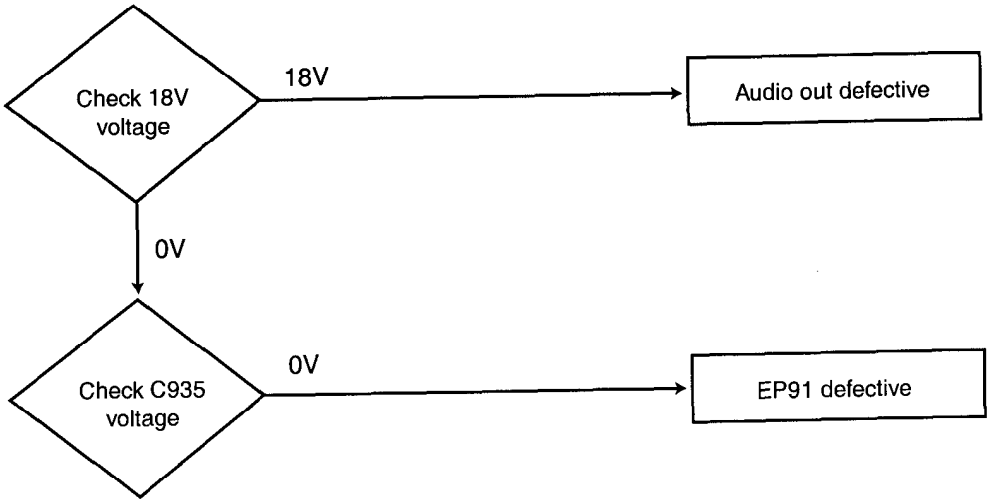
TROUBLE SHOOTING



⑥ NO SOUND (NO AUDIO POWER)



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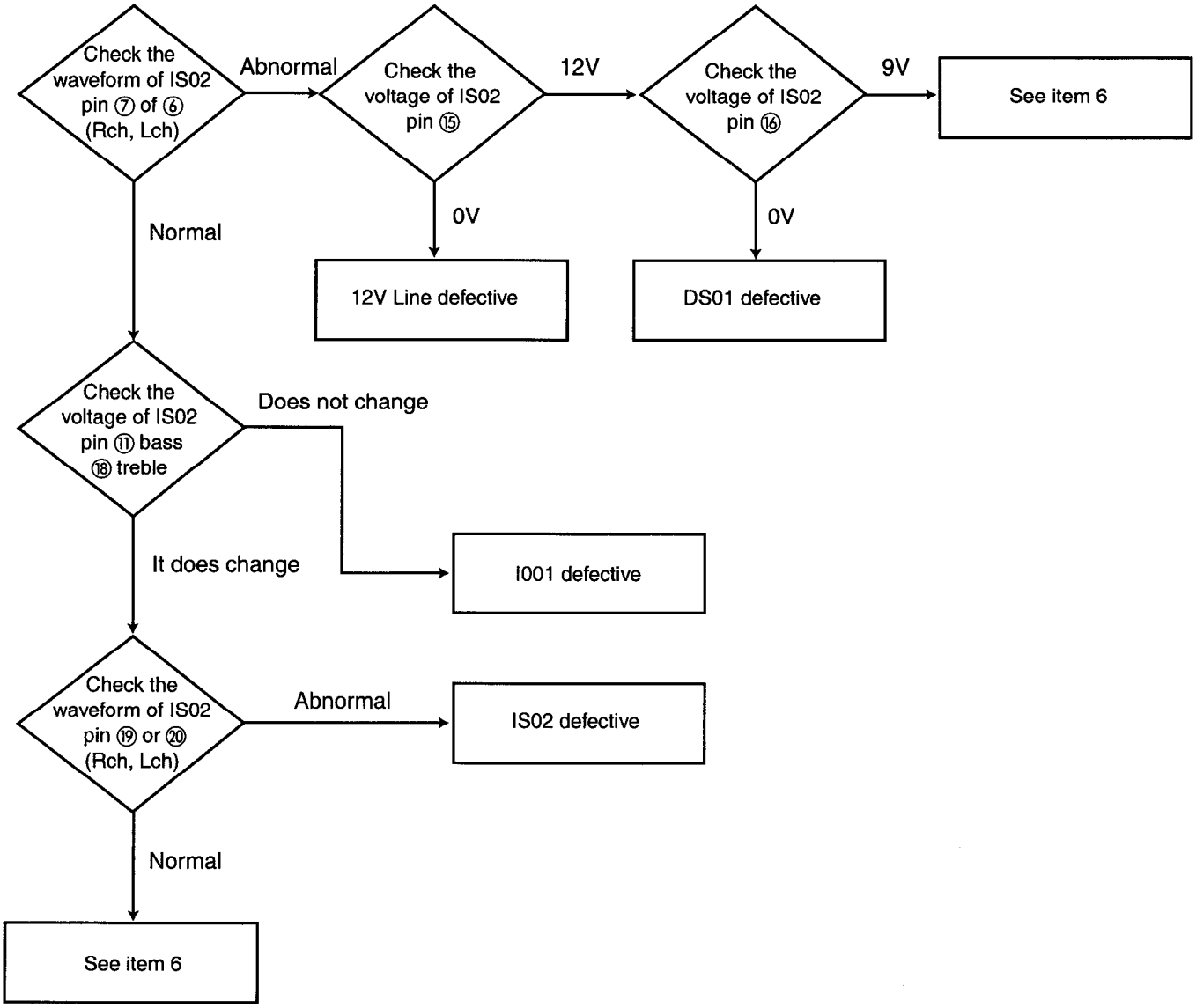
TROUBLE SHOOTING

⑦ NO SOUND OR NOT VARIABLE (BASS, TREBLE)



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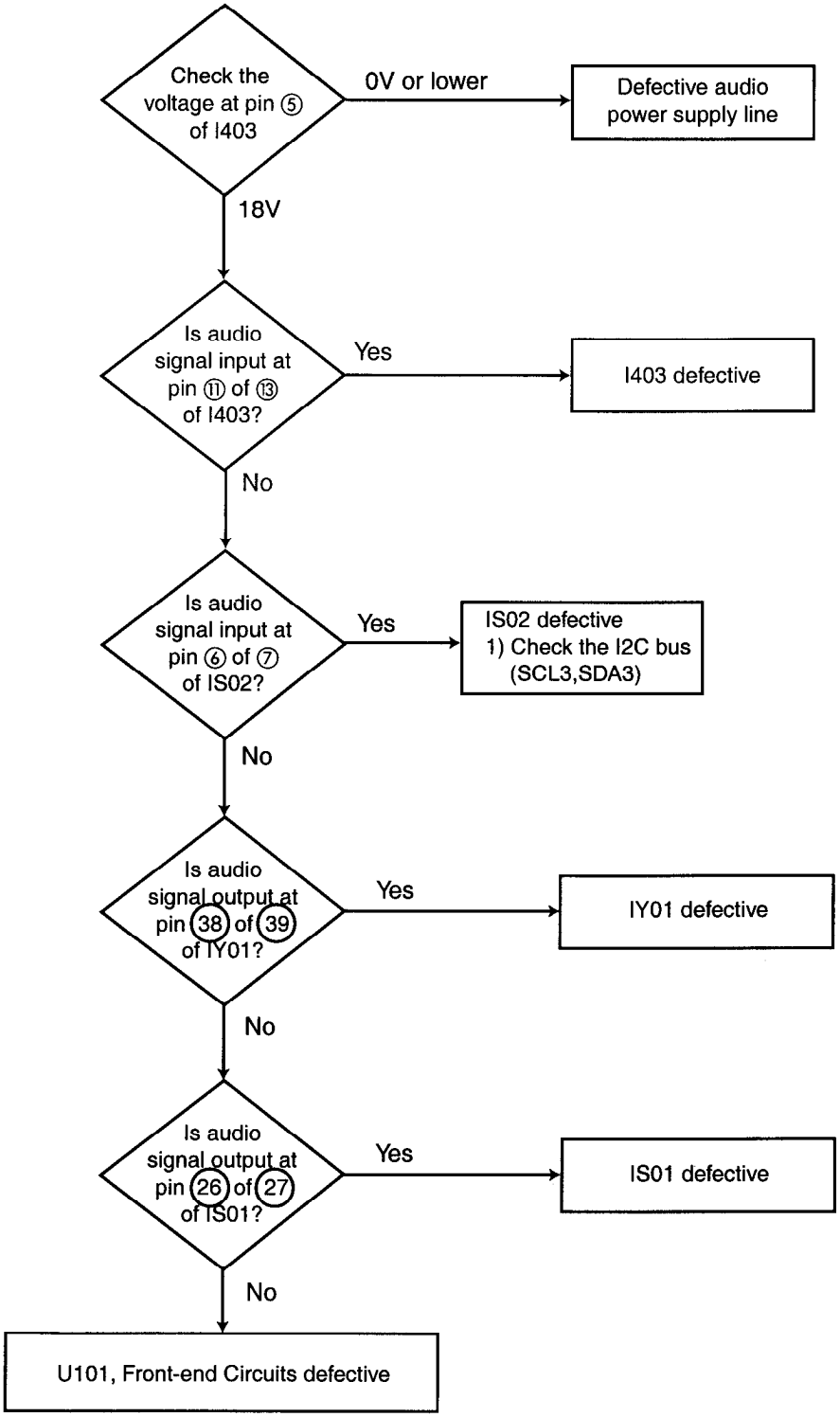
TROUBLE SHOOTING

⑧ NO SOUND (WHEN SURROUND OFF)


Check the voltage at pin ⑤ of I403
0V or lower
Defective audio power supply line
18V
Is audio signal input at pin ⑪ of ⑬ of I403?
Yes
I403 defective
No
Is audio signal input at pin ⑥ of ⑦ of IS02?
Yes
IS02 defective
1) Check the I2C bus (SCL3,SDA3)
No
Is audio signal output at pin 38 of 39 of IY01?
Yes
IY01 defective
No
Is audio signal output at pin 26 of 27 of IS01?
Yes
IS01 defective
No
U101, Front-end Circuits defective

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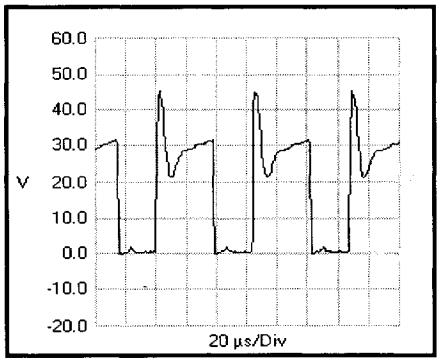
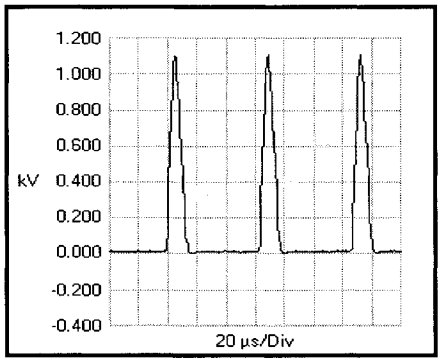
WAVEFORMS AT EACH SECTION

Numbers inside circle correspond to locations shown in the circuit diagram.

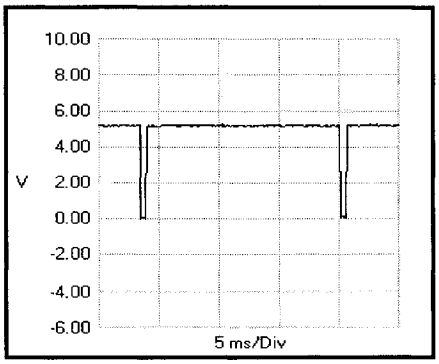
1 Q701 COLLECTOR (H - DRIVE)



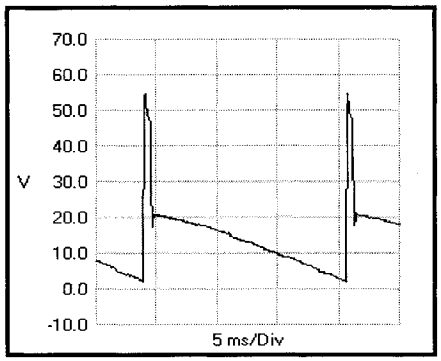
2 Q702 COLLECTOR (H - OUTPUT)



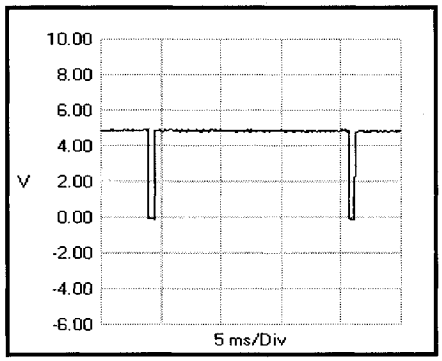
3 I601 PIN#2 (V - OUT)



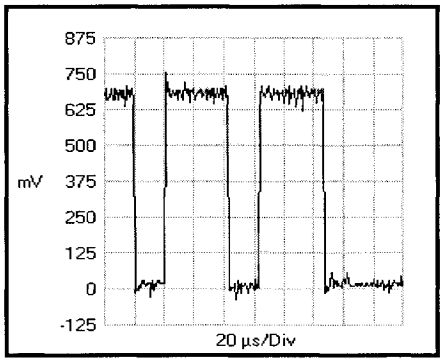
4 I601 PIN#12 (V - OUTPUT)



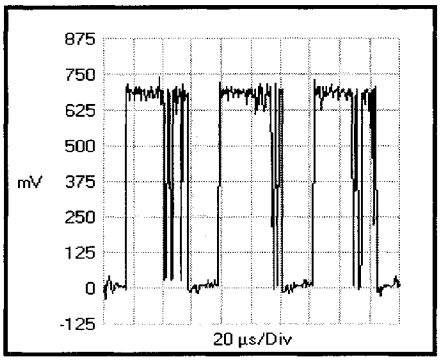
5 I001 PIN#55 (V - SYNC)



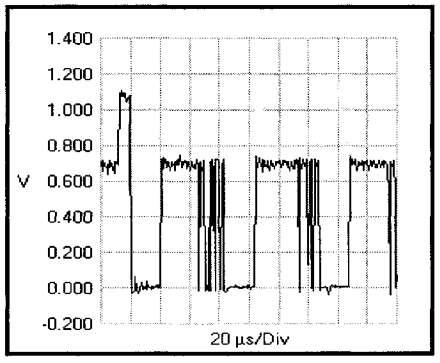
6 I001 PIN#44 (OSD - B)



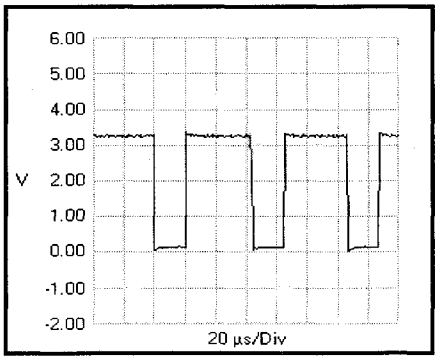
7 I001 PIN#43 (OSD - G)



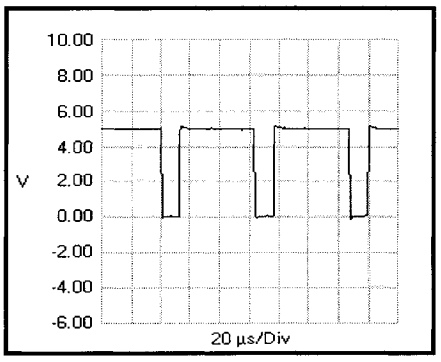
8 I001 PIN#42 (OSD - R)



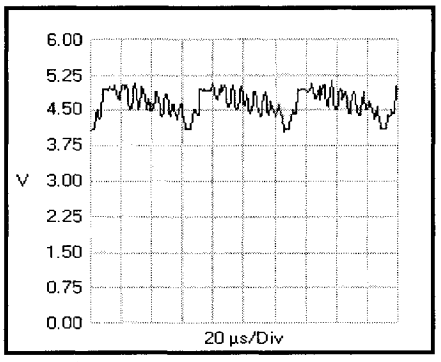
9 I501 PIN #36 (Y-S2)



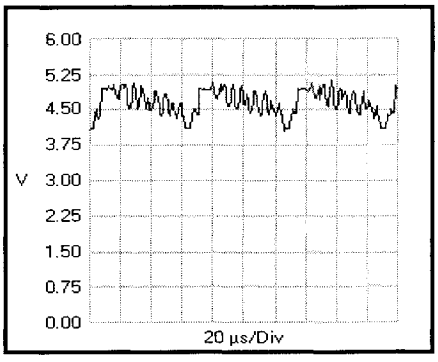
10 I001 PIN#39 (H - SYNC)



11 U102 PIN#18 (VIDEO)



12 U101 PIN#18 (VIDEO)



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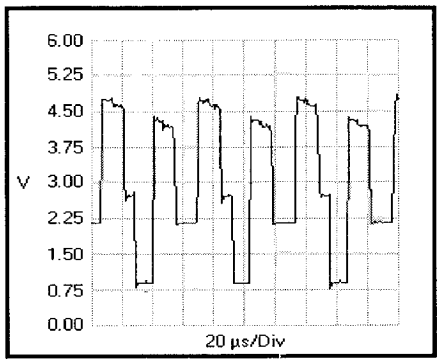
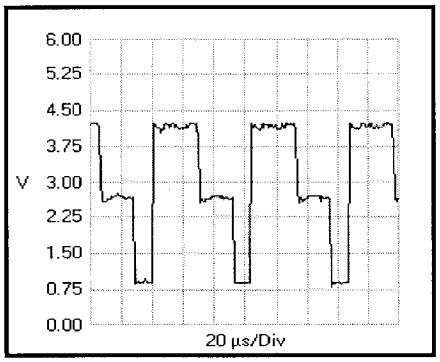
WAVEFORMS AT EACH SECTION

Numbers inside circle correspond to locations shown in the circuit diagram.

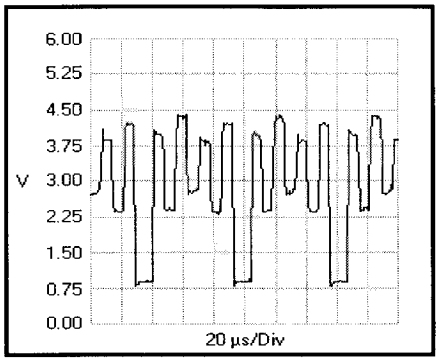
(13) I501 PIN#43 (R - OUT)



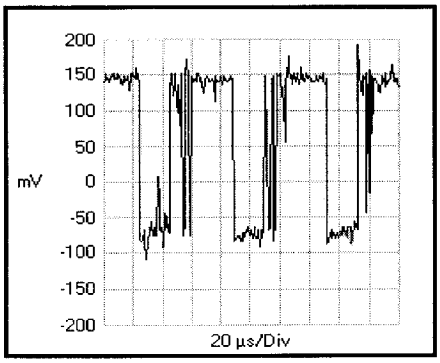
(14) I501 PIN#42 (G - OUT)



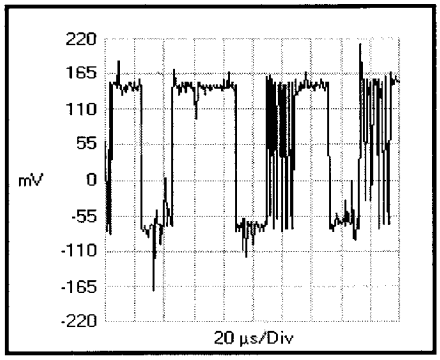
(15) I501 PIN#41 (B - OUT)



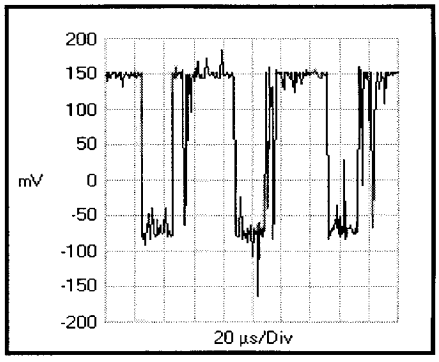
(16) I501 PIN#39 (OSDR - IN)



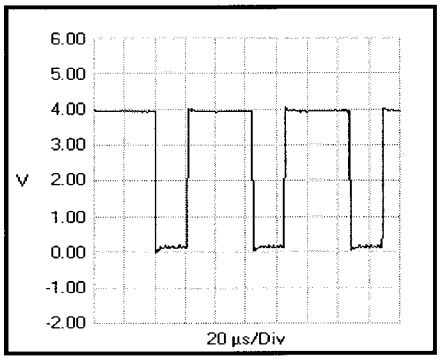
(17) I501 PIN#38 (OSDG - IN)



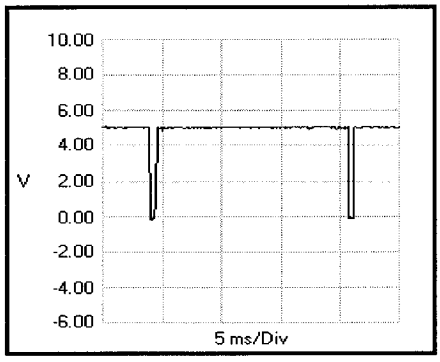
(18) I501 PIN#37 (OSDB - IN)



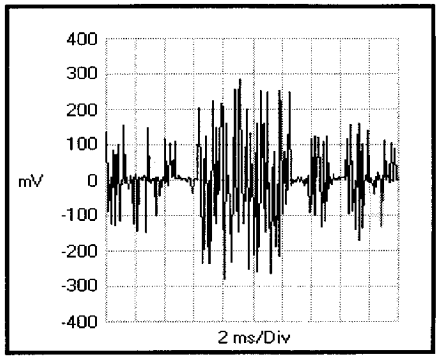
(19) I001 PIN #41 (OSD-BLK)



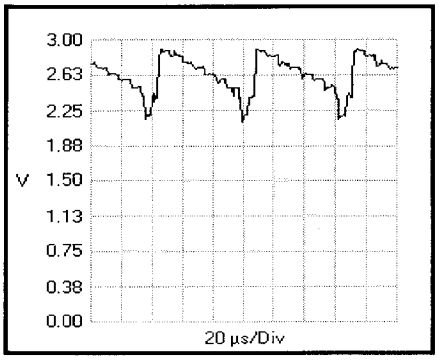
(20) I501 PIN#31 (VP - OUT)



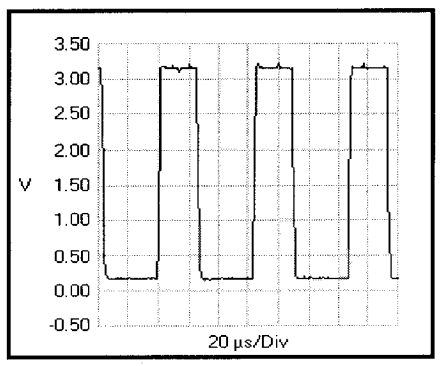
(21) I501 PIN#13 (C - IN)



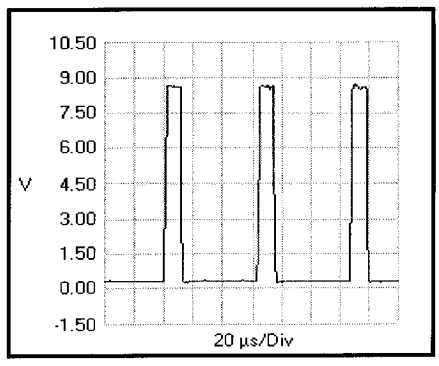
(22) I501 PIN#15 (Y1 - IN)



(23) I501 PIN#23 (H - OUT)



(24) I501 PIN#25 (FBP - IN)



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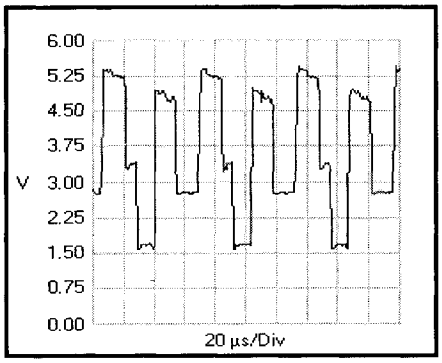
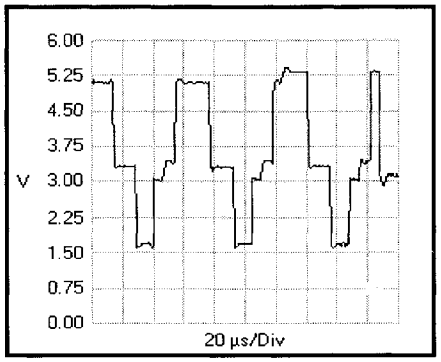
WAVEFORMS AT EACH SECTION

Numbers inside circle correspond to locations shown in the circuit diagram.

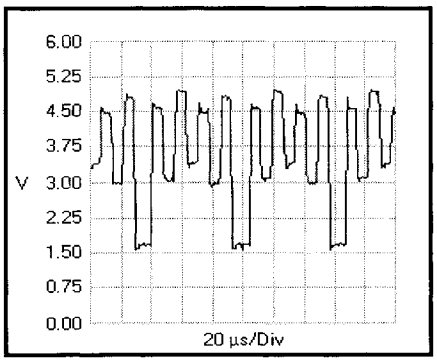
(25) EY1 CONNECTOR PIN#1 (R)



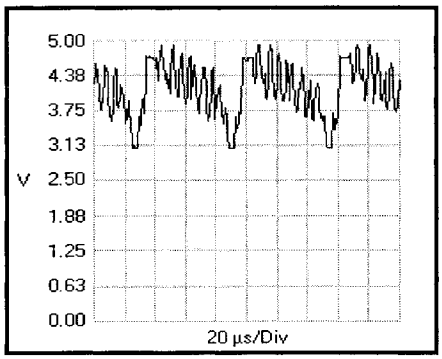
(26) EY1 CONNECTOR PIN#2 (G)



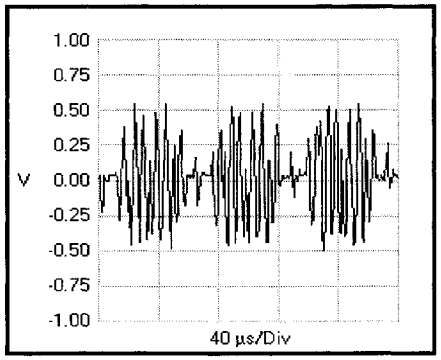
(27) EY1 CONNECTOR PIN#3 (B)



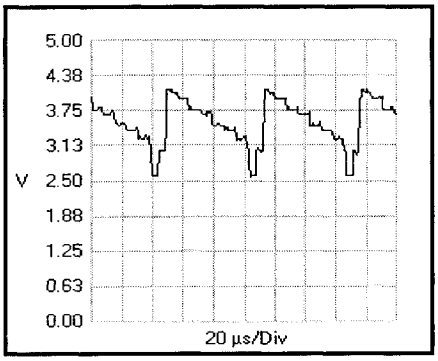
(28) PCXA CONN. PIN#1 (VIDEO - IN)



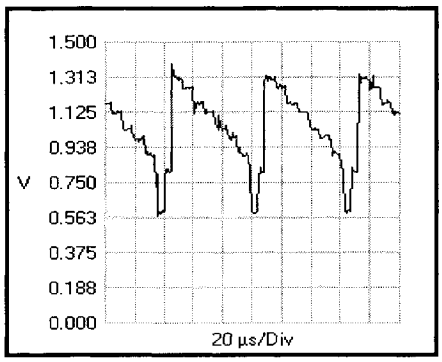
(29) PCXA CONN. PIN#5 (C - OUT)



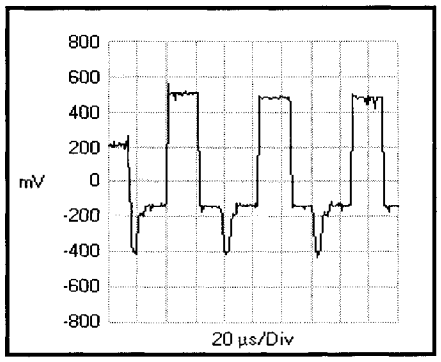
(30) PCXA CONN. PIN#7 (Y - OUT)



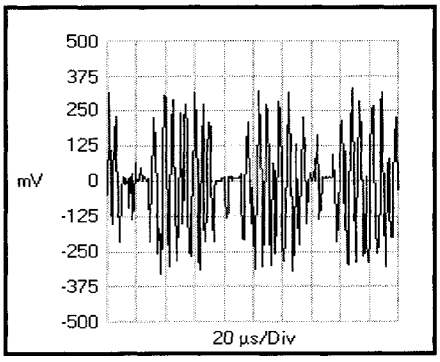
(31) PIPA CONN. PIN#15 (Y - PIP)



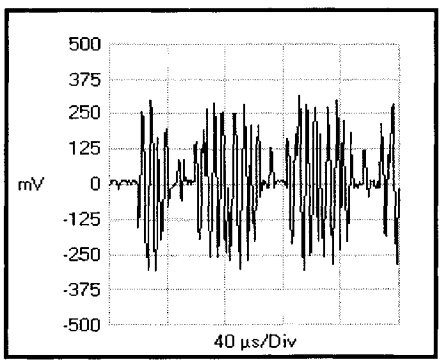
(32) PIPA CONN. PIN#12 (Y - IN)



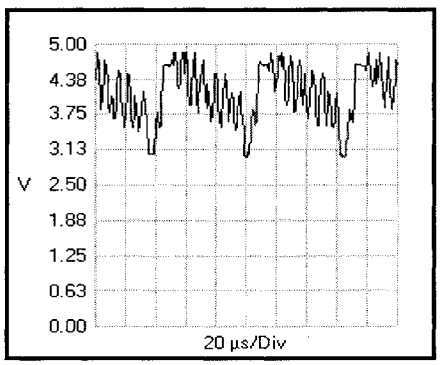
(33) PIPA CONN. PIN#7 (C - IN)



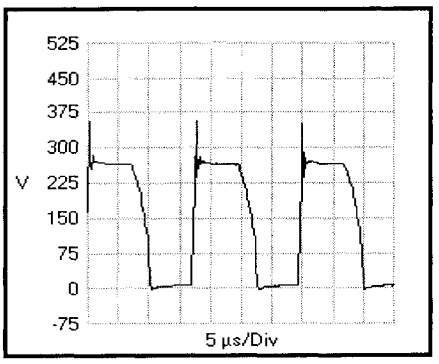
(34) PIPA CONN. PIN#5 (C - PIP)



(35) PIPA CONN. PIN#1 (SUB - VIDEO)



(36) I901 PIN#3 (USE ISOLATION TRANS.)



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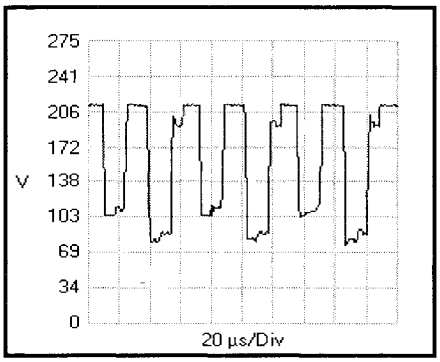
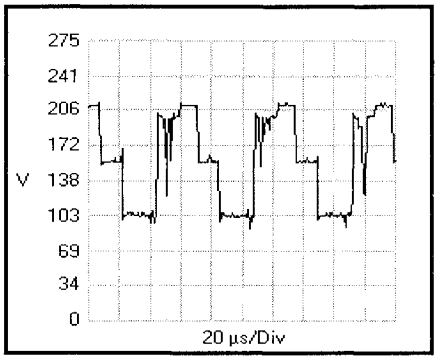
WAVEFORMS AT EACH SECTION

Numbers inside circle correspond to locations shown in the circuit diagram.

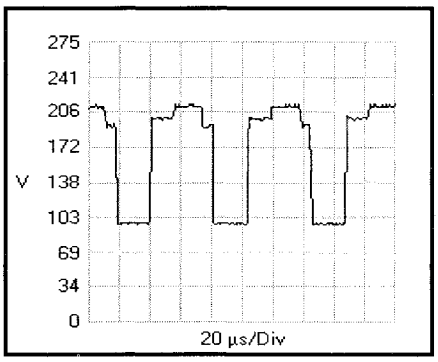
(37) Q851 COLLECTOR (RED)



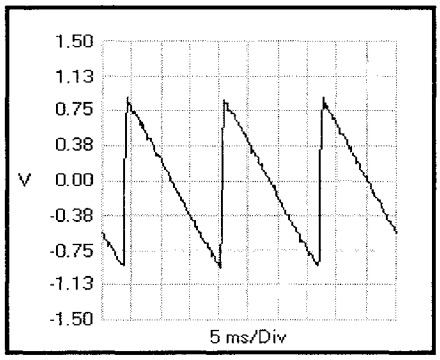
(38) Q857 COLLECTOR (BLUE)



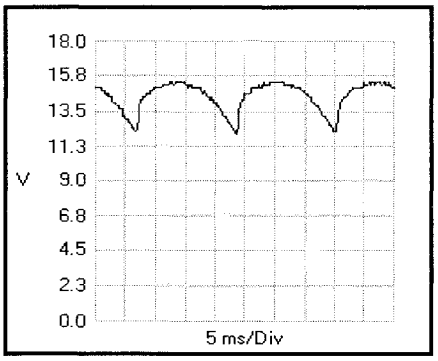
(39) Q854 COLLECTOR (GREEN)



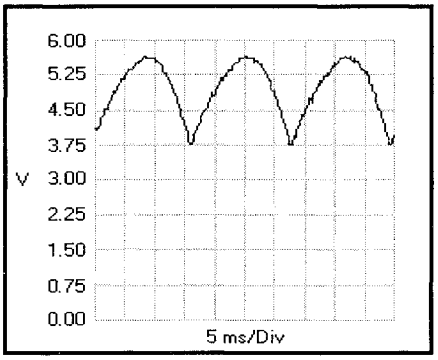
(40) P65A CONN. PIN #1 (SAW TOUTH)



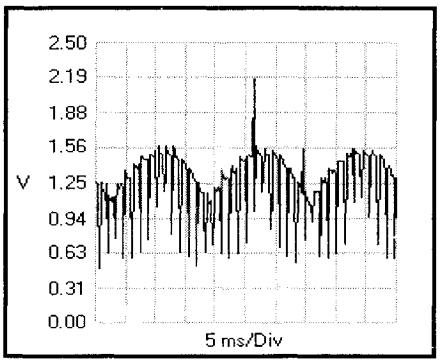
(41) P65A CONN. PIN #2 (PARABOLA)



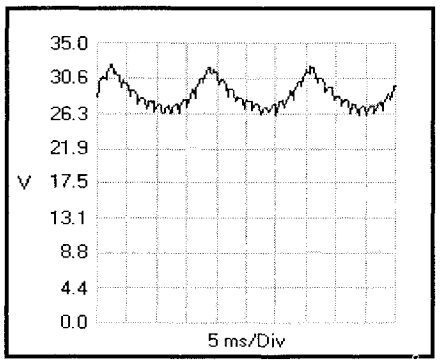
(42) Q650 EMITTER (SIDE PIN DRIVE)



(43) Q750 BASE (SIDE PIN ADJ.)



(44) Q751 EMITTER (SIDE PIN OUTPUT)



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REPLACEMENT PARTS LIST

PRODUCT SERVICE NOTE: Components marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully, the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver trough improper servicing.

ABBREVIATIONS

Capacitors:

AL: Aluminum Electrolytic
CD: Ceramic Disc
EL: Electrolitic
PF: Polyester Film
PP: Polypropylene
PL: Plastic
TA: Tantalum
PR: Paper
TM: Trimmer
MC: Mylar

Resistors:

CF: Carbon Film
CC: Carbon Composition
MF: Metal Oxide
VR: Variable Resistor
WW: Wire Wound
FR: Fuse Resistor
MG: Metal Grazed

Semiconductors:

TR: Transistor
DI: Diode
ZD: Zener Diode
VA: Varistor
TH: Termistor
IC: Integrated Circuit

SYMBOL NO.	PART NO.	PART DESCRIPTION
		MAIN P.W.B. CAPACITORS
C001	0800324R	EL. 100UF-M(SMG) 6.3V
C002	0800365N	EL. 2200UF-M 6.3V
C003	0880016R	PF. 0.1UF 50V
C004	0880198R	PF. 0.22UF-J 50V
C007	0890089R	CD. 1500PF-K 50V
C008	0880016R	PF. 0.1UF 50V
C009	0800351R	EL. 470UF-M 6.3V
C00A	0800286R	EL. 4.7UF-M(SMG) 25V
C00K	0800291R	EL. 10UF-M(SMG) 16V (CZ97/95/93)
C00R	0800326R	EL. 100UF-M 16V
C00T	0800324R	EL. 100UF-M(SMG) 6.3V
C010	0244105R	CD. 2200PF-K 50V TAPE
C011	0890121R	CD. 33PF-J CH 50V
C012	0890121R	CD. 33PF-J CH 50V
C013	0890074R	CD. 100PF-J 50V
C014	0890074R	CD. 100PF-J 50V
C017	0800324R	EL. 100UF-M(SMG) 6.3V
C018	0880009R	PF. 0.01UF-K 50V
C019	0800291R	EL. 10UF-M(SMG) 16V
C020	0800279R	EL. 1.0UF-M(SMG) 50V
C021	0880009R	PF. 0.01UF-K 50V
C026	0890077R	CD. 180PF-K 50V
C027	0284638R	EL. 10UF-SME(BP) 16V
C028	0284621R	EL. 0.47UF 50V (BP)
C030	0800291R	EL. 10UF-M(SMG) 16V (CZ97,CY97,CZ95,CY95)
C032	0800291R	EL. 10UF-M(SMG) 16V (CZ97,CY97,CZ95,CY95)
C034	0880015R	PF. 0.068UF-K 50V
C035	0284638R	EL. 10UF-SME(BP) 16V
C036	0890077R	CD. 180PF-K 50V
C037	0284621R	EL. 0.47UF 50V (BP)
C038	0284623R	EL. 1UF-SME(BP) 50V
C039	0284623R	EL. 1UF-SME(BP) 50V
C040	0880009R	PF. 0.01UF-K 50V
C041	0244105R	CD. 2200PF-K 50V TAPE
C042	0244105R	CD. 2200PF-K 50V TAPE
C043	0880016R	PF. 0.1UF 50V
C044	0890074R	CD. 100PF-J 50V
C045	0890074R	CD. 100PF-J 50V
C046	0880016R	PF. 0.1UF 50V
C047	0880016R	PF. 0.1UF 50V (CZ97,CY97,CZ95,CY95)
C048	0800291R	EL. 10UF-M(SMG) 16V
C049	0284638R	EL. 10UF-SME(BP) 16V
C050	0890083R	CD. 470PF-K 50V
C051	0800326R	EL. 100UF-M 16V
C052	0890087R	CD. 1000PF-K 50V
C053	0800324R	EL. 100UF-M(SMG) 6.3V C113
C054	0800326R	EL. 100UF-M 16V
C055	0880005R	MC. 0.0022U
C057	0890087R	CD. 1000PF-K 50V
C058	0244107R	CD. 3300PF-K 50V APE
C05A	0284623R	EL. 1UF-SME(BP) 50V
C05C	0800291R	EL. 10UF-M(SMG) 16V
C060	0890087R	CD. 1000PF-K 50V
C061	0880016R	PF. 0.1UF 50V
C062	0880009R	PF. 0.01UF-K 50V (CZ97/95/93)
C063	0880009R	PF. 0.01UF-K 50V (CZ97/95/93)
C064	0890089R	CD. 1500PF-K 50V (CZ97/95/93)
C065	0880009R	PF. 0.01UF-K 50V (CZ97/95/93)
C066	0890087R	CD. 1000PF-K 50V
C067	0890087R	CD. 1000PF-K 50V
C068	0890087R	CD. 1000PF-K 50V
C101	0800291R	EL. 10UF-M(SMG) 16V
C102	0880009R	PF. 0.01UF-K 50V
C103	0800361N	EL. 1000UF 16V
C104	0800324R	EL. 100UF-M(SMG) 6.3V
C105	0880005R	MC. 0.0022U
C106	0880009R	PF. 0.01UF-K 50V
C107	0800361N	EL. 1000UF 16V

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REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
C108	0880009R	PF. 0.01UF-K 50V (CZ97,CY97,CZ95,CY95)	C510	0800291R	EL. 10UF-M(SMG) 16V (CZ97,CY97)
C109	0880005R	MC. 0.0022U (CZ97,CY97,CZ95,CY95)	C512	0800291R	EL. 10UF-M(SMG) 16V
C10A	0890074R	CD. 100PF-J 50V (CZ97,CY97,CZ95,CY95)	C513	0880016R	PF. 0.1UF 50V
C10C	0890074R	CD. 100PF-J 50V (CZ97,CY97,CZ95,CY95)	C515	0880009R	PF. 0.01UF-K 50V
C10D	0890074R	CD. 100PF-J 50V	C516	0880016R	PF. 0.1UF 50V
C10E	0890074R	CD. 100PF-J 50V	C517	0880016R	PF. 0.1UF 50V
C110	0880009R	PF. 0.01UF-K 50V	C518	0800279R	EL. 1.0UF-M(SMG) 50V
C111	0880009R	PF. 0.01UF-K 50V (CZ97,CY97,CZ95,CY95)	C519	0800282R	EL. 2.2UF-M(SMG) 50V
C112	0800361N	EL. 1000UF 16V (CZ97,CY97,CZ95,CY95)	C520	0890116R	CD. 15PF-J CH 50V
C113	0800324R	EL. 100UF-M(SMG) 6.3V (CZ97,CY97,CZ95,CY95)	C521	0880005R	MC. 0.0022U
C114	0880009R	PF. 0.01UF-K 50V (CZ97,CY97,CZ95,CY95)	C522	0800273R	EL. 0.22UF-M 50V
C115	0800361N	EL. 1000UF 16V (CZ97,CY97,CZ95,CY95)	C524	0800326R	EL. 100UF-M 16V
C117	0800326R	EL. 100UF-M 16V (CZ97,CY97,CZ95,CY95)	C525	0880009R	PF. 0.01UF-K 50V
C118	0880009R	PF. 0.01UF-K 50V (CZ97,CY97,CZ95,CY95)	C526	0880009R	PF. 0.01UF-K 50V
C119	0880016R	PF. 0.1UF 50V (CZ97,CY97,CZ95,CY95)	C527	0800326R	EL. 100UF-M 16V
C122	0800291R	EL. 10UF-M(SMG) 16V (CZ97,CY97,CZ95,CY95)	C528	0800291R	EL. 10UF-M(SMG) 16V
C123	0800326R	EL. 100UF-M 16V	C529	0800282R	EL. 2.2UF-M(SMG) 50V
C3F0	0800291R	EL. 10UF-M(SMG) 16V (CY97)	C530	0880009R	PF. 0.01UF-K 50V
C3F1	0800326R	EL. 100UF-M 16V (CY97)	C531	0880009R	PF. 0.01UF-K 50V
C3F2	0800291R	EL. 10UF-M(SMG) 16V (CZ97,CY97)	C532	0880016R	PF. 0.1UF 50V
C401	0800353R	EL.470UF-M 16V	C533	0880016R	PF. 0.1UF 50V
C402	0800291R	EL. 10UF-M(SMG) 16V	C534	0880016R	PF. 0.1UF 50V
C403	0800291R	EL. 10UF-M(SMG) 16V	C535	0800353R	EL.470UF-M 16V
C410	0800291R	EL. 10UF-M(SMG) 16V	C536	0880012R	MC. 0.022U 0204249C
C411	0800291R	EL. 10UF-M(SMG) 16V	C537	0880016R	PF. 0.1UF 50V
C430	0880203R	PF. 0.47UF-J 50V	C538	0800282R	EL. 2.2UF-M(SMG) 50V
C431	0880203R	PF. 0.47UF-J 50V	C542	0880009R	PF. 0.01UF-K 50V
C432	0800292R	EL. 10UF-M(SMG) 25V	C543	0880009R	PF. 0.01UF-K 50V
C434	0890087R	CD. 1000PF-K 50V	C544	0800353R	EL.470UF-M 16V
C435	0890087R	CD. 1000PF-K 50V	C546	0800326R	EL. 100UF-M 16V
C437	0800326R	EL. 100UF-M 16V	C547	0880016R	PF. 0.1UF 50V
C438	0800362N	EL. 1000UF-M 25V	C548	0890074R	CD. 100PF-J 50V
C441	0800368N	EL. 2200UF-M 25V	C549	0890074R	CD. 100PF-J 50V
C442	0800368N	EL. 2200UF-M 25V	C550	0800326R	EL. 100UF-M 16V
C443	0800317R	EL. 47UF-M(SMG) 16V	C555	0800291R	EL. 10UF-M(SMG) 16V
C444	0800318R	EL. 47UF-M 25V	C556	0880016R	PF. 0.1UF 50V
C445	0800318R	EL. 47UF-M 25V	C590	0890079R	CD. 270PF-K 50V (CY97/95/93)
C450	0800291R	EL. 10UF-M(SMG) 16V	C5M1	0890087R	CD. 1000PF-K 50V
C485	0284625R	EL. 2.2UF-SME(BP)50V	C5MM	0890074R	CD. 100PF-J 50V
C486	0284625R	EL. 2.2UF-SME(BP)50V	C5P1	0800299R	EL. 22UF-M(SMG) 16V
C4F0	0800286R	EL. 4.7UF-M(SMG) 25V (CZ97,CY97)	C5P2	0244105R	CD. 2200PF-K 50V TAPE
C4F1	0800286R	EL. 4.7UF-M(SMG) 25V (CZ97,CY97)	C601	0890085R	CD. 680PF-K 50V
C4MM	0890074R	CD. 100PF-J 50V	C602	0800317R	EL. 47UF-M(SMG) 16V
C500	0800294R	EL. 10UF-M(SMG) 50V (CZ97,CY97)	C603	0880009R	PF. 0.01UF-K 50V
C501	0800291R	EL. 10UF-M(SMG) 16V (CZ97,CY97)	C604	0880012R	MC. 0.022U 0204249C
C503	0880016R	PF. 0.1UF 50V (CZ97,CY97)	C605	0800312R	EL. 33UF-M 50V
C504	0800291R	EL. 10UF-M(SMG) 16V	C606	0880207R	PF. 1.0UF-J 50V
C505	0880016R	PF. 0.1UF 50V	C607	0800337R	EL. 220UF 35V (SMG TY PE)
C506	0800291R	EL. 10UF-M(SMG) 16V (CZ97,CY97)	C608	0800279R	EL. 1.0UF-M(SMG) 50V

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
C609	0800368N	EL. 2200UF-M 25V	C7M4	0880009R	PF. 0.01UF-K 50V
C610	0880016R	PF. 0.1UF 50V (CY97/95/93)	C7M5	0880009R	PF. 0.01UF-K 50V
C610	0880198R	PF. 0.22UF-J 50V (CZ97/95/93)	C7M6	0880009R	PF. 0.01UF-K 50V
C611	0880016R	PF. 0.1UF 50V	CA01	0800279R	EL. 1.0UF-M(SMG) 50V
C612	0890081R	CD. 330PF 50V	CA02	0800279R	EL. 1.0UF-M(SMG) 50V
C613	0800284R	EL. 3.3UF-M(SMG) 50V	CA03	0800279R	EL. 1.0UF-M(SMG) 50V (CZ97,CY97)
C614	0800308R	EL. 33UF-M(SMG) 16V	CA04	0800279R	EL. 1.0UF-M(SMG) 50V (CZ97,CY97)
C714	0880009R	PF. 0.01UF-K 50V	CA05	0800279R	EL. 1.0UF-M(SMG) 50V
C715	0247842R	CD. 33PF-SL 500V	CA06	0800279R	EL. 1.0UF-M(SMG) 50V
C716	0880019R	PF. 0.33UF-KB 50V	CA07	0800279R	EL. 1.0UF-M(SMG) 50V
⚠ C718	AN01126F	PP.0.0039UF	CA08	0800279R	EL. 1.0UF-M(SMG) 50V
C71A	AJ00131F	CD. 560P DC2K-R	CA34	0800291R	EL. 10UF-M(SMG) 16V
C71C	0244101R	CD. 1000PF-K 50V TAPE (CZ97/95/93)	CA37	0800291R	EL. 10UF-M(SMG) 16V
C71C	0244105R	CD. 2200PF-K 50V TAPE (CY97/95/93)	CC01	0880009R	PF. 0.01UF-K 50V
C71F	0243506R	CD. 270PF-K 500V	CC02	0880009R	PF. 0.01UF-K 50V
⚠ C71H	0244715F	CD. 180FP 2KV (CZ97/95/93)	CC06	0880016R	PF. 0.1UF 50V
⚠ C71H	AN01115F	PP.0.0015UF (CY97/95/93)	CC07	0880009R	PF. 0.01UF-K 50V (CZ97,CY97,CZ95,CY95)
C720	0244501R	CD. 1000PF-K 500V	CC10	0880016R	PF. 0.1UF 50V
⚠ C721	AN01142F	PP.0.015UF	CS01	0800326R	EL. 100UF-M 16V
⚠ C722	0299709F	PF. 0.022UF-K 630V	CS02	0800299R	EL. 22UF-M(SMG) 16V
C723	0259471R	EL. 6.8UF-M (BP) 50V TAPE	CS03	0800279R	EL. 1.0UF-M(SMG) 50V
C724	AN01172F	PP. 0.27UF	CS04	0800286R	EL. 4.7UF-M(SMG) 25V
⚠ C725	0800279R	EL. 1.0UF-M(SMG) 50V	CS05	0800279R	EL. 1.0UF-M(SMG) 50V
⚠ C726	AN01169F	PP. 0.22UF (CY97/95/93)	CS06	0800291R	EL. 10UF-M(SMG) 16V
C726	AN01174F	PP. 0.33UF (CZ97/95/93)	CS07	0880016R	PF. 0.1UF 50V
C72A	0244501R	CD. 1000PF-K 500V	CS08	0880014R	MC. 0.047U
C72C	0800352R	EL.470UF 10V	CS09	0880016R	PF. 0.1UF 50V
C730	0800363N	EL. 1000UF 35V	CS10	0880016R	PF. 0.1UF 50V
C732	0800361N	EL. 1000UF 16V	CS11	0800279R	EL. 1.0UF-M(SMG) 50V
C736	0244501R	CD. 1000PF-K 500V	CS12	0800279R	EL. 1.0UF-M(SMG) 50V
⚠ C737	0800304R	EL. 22UF-M(SMG) 63V	CS13	0800279R	EL. 1.0UF-M(SMG) 50V
C738	AL00031R	EL. 33UF-M 250V	CS14	0292712F	TA. 3.3UF-K 16V
C73A	0800317R	EL. 47UF-M(SMG) 16V	CS15	0292714F	TA. 10UF-K 16V
C742	0254823G	EL.100UF-M 160V	CS16	0800279R	EL. 1.0UF-M(SMG) 50V
C747	0880016R	PF. 0.1UF 50V	CS17	0800279R	EL. 1.0UF-M(SMG) 50V
C748	0800291R	EL. 10UF-M(SMG) 16V	CS21	AN00632R	PF. 0.039UF 50V TAPE
C749	0800326R	EL. 100UF-M 16V	CS22	0880009R	PF. 0.01UF-K 50V
C754	0880016R	PF. 0.1UF 50V	CS23	AN00632R	PF. 0.039UF 50V TAPE
C755	0880005R	MC. 0.0022U (CY97/95/93)	CS24	AN00632R	PF. 0.039UF 50V TAPE
C755	0880006R	MC. 0.033U (CZ97/95/93)	CS25	0800279R	EL. 1.0UF-M(SMG) 50V
C756	0800317R	EL. 47UF-M(SMG) 16V	CS26	0800279R	EL. 1.0UF-M(SMG) 50V
C757	0800291R	EL. 10UF-M(SMG) 16V	CS27	0800291R	EL. 10UF-M(SMG) 16V
C761	0244109R	CD. 4700PF-KB 50V	CS28	0800291R	EL. 10UF-M(SMG) 16V
C76A	0243508R	CD. 390PF-K 500V	CS29	0800291R	EL. 10UF-M(SMG) 16V
C76E	0890077R	CD. 180PF-K 50V	CS30	0800353R	EL.470UF-M 16V
C793	0800317R	EL. 47UF-M(SMG) 16V	CS31	0800366N	EL. 2200UF-10V SMG
C7M1	0800291R	EL. 10UF-M(SMG) 16V	CS32	0800291R	EL. 10UF-M(SMG) 16V
C7M2	0880009R	PF. 0.01UF-K 50V	CS33	AN00621R	PF. 0.0056UF 50V TAPE
C7M3	0880009R	PF. 0.01UF-K 50V	CS34	0800291R	EL. 10UF-M(SMG) 16V

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
CS35	0800284R	EL. 3.3UF-M(SMG) 50V	C3F3	0880016R	PF. 0.1UF 50V (CZ97)
CS40	0890074R	CD. 100PF-J 50V	C630	0880014R	MC. 0.047U (CY97/95/93)
CS50	0800291R	EL. 10UF-M(SMG) 16V	C630	AN00636R	PF. 0.082UF 50V TAPE (CZ97/95/93)
CS51	0890074R	CD. 100PF-J 50V	C631	0800317R	EL. 47UF-M(SMG) 16V
CS52	0800291R	EL. 10UF-M(SMG) 16V (CZ97,CY97)	C632	0880004R	MC. 0.0015U (CY97/95/93)
CS53	0800291R	EL. 10UF-M(SMG) 16V (CZ97,CY97)	C632	0880015R	PF. 0.068UF-K 50V (CZ97/95/93)
CS54	0284623R	EL. 1UF-SME(BP) 50V (CZ97,CY97)	C633	0800282R	EL. 2.2UF-M(SMG) 50V
CS55	0880016R	PF. 0.1UF 50V (CZ97,CY97)	C634	0800279R	EL. 1.0UF-M(SMG) 50V
CS56	0284623R	EL. 1UF-SME(BP) 50V (CZ97,CY97)	C637	0800294R	EL. 10UF-M(SMG) 50V
CS57	0800286R	EL. 4.7UF-M(SMG) 25V (CZ97,CY97)	C638	0800282R	EL. 2.2UF-M(SMG) 50V
CS58	0800286R	EL. 4.7UF-M(SMG) 25V (CZ97,CY97)	C735	0880009R	PF. 0.01UF-K 50V (CZ97/95/93)
CS59	0880016R	PF. 0.1UF 50V (CZ97,CY97)	C735	0880016R	PF. 0.1UF 50V (CY97/95/93)
CS60	0800291R	EL. 10UF-M(SMG) 16V (CZ97,CY97)	C750	0800282R	EL. 2.2UF-M(SMG) 50V
CS61	0800291R	EL. 10UF-M(SMG) 16V (CZ97,CY97)	C751	0800321R	EL. 47UF-M 50V
CS62	0800326R	EL. 100UF-M 16V (CZ97,CY97)	C752	0284623R	EL. 1UF-SME(BP) 50V
CS63	0800326R	EL. 100UF-M 16V (CZ97,CY97)	C851	0800326R	EL. 100UF-M 16V
CS64	0800317R	EL. 47UF-M(SMG) 16V (CZ97,CY97)	C854	0890083R	CD. 470PF-K 50V
CS66	0800291R	EL. 10UF-M(SMG) 16V	C856	0890083R	CD. 470PF-K 50V
CY01	0800299R	EL. 22UF-M(SMG) 16V	C857	0890083R	CD. 470PF-K 50V
CY04	0800299R	EL. 22UF-M(SMG) 16V	C859	0255524F	EL. 4.7MF-M 250V(KME)
CY05	0800299R	EL. 22UF-M(SMG) 16V	C860	AJ00559	CD. 2200PF2KV
CY06	0800299R	EL. 22UF-M(SMG) 16V	C866	0880009R	PF. 0.01UF-K 50V
CY07	0800299R	EL. 22UF-M(SMG) 16V	C874	0890087R	CD. 1000PF-K 50V
CY08	0800326R	EL. 100UF-M 16V	C875	0890087R	CD. 1000PF-K 50V
CY09	0880016R	PF. 0.1UF 50V	C876	0890087R	CD. 1000PF-K 50V
CY10	0800291R	EL. 10UF-M(SMG) 16V	C877	0890074R	CD. 100PF-J 50V
CY11	0800291R	EL. 10UF-M(SMG) 16V (CZ97,CY97)	C878	0890074R	CD. 100PF-J 50V
CY12	0800291R	EL. 10UF-M(SMG) 16V (CZ97,CY97)	C879	0890074R	CD. 100PF-J 50V
CY13	0800291R	EL. 10UF-M(SMG) 16V (CZ97,CY97)	C880	0890085R	CD. 680PF-K 50V
CY18	0800286R	EL. 4.7UF-M(SMG) 25V (CZ97,CY97)	C881	0890083R	CD. 470PF-K 50V
CY22	0880016R	PF. 0.1UF 50V	C882	0890084R	CD. 560PF-K 50V
CY30	0800317R	EL. 47UF-M(SMG) 16V	C883	0800344R	EL. 330UF-M(SMG) 16V
CY31	0880009R	PF. 0.01UF-K 50V	C884	0880009R	PF. 0.01UF-K 50V
CY32	0880009R	PF. 0.01UF-K 50V	C890	0244105R	CD. 2200PF-K 50V TAPE
CY33	0800326R	EL. 100UF-M 16V	C901	AN01443S	ACROSS CAPA 0.1UF 250V RE104
CY34	0800326R	EL. 100UF-M 16V	⚠ C902	AN01443S	ACROSS CAPA 0.1UF 250V RE104
CY35	0880009R	PF. 0.01UF-K 50V	⚠ C903	0248593F	CD. 4700PF-Z 250V
CY36	0880009R	PF. 0.01UF-K 50V	⚠ C904	0248593F	CD. 4700PF-Z 250V
CY37	0800317R	EL. 47UF-M(SMG) 16V	C905	0800292R	EL. 10UF-M(SMG) 25V
CY50	0800299R	EL. 22UF-M(SMG) 16V (CZ97,CY97,CZ95,CY95)	C905A	0284292	EL. 330UF-M 250V(KMH)
CY51	0800291R	EL. 10UF-M(SMG) 16V	C905B	0284292	EL. 330UF-M 250V(KMH)
CY52	0800291R	EL. 10UF-M(SMG) 16V	C906	0800291R	EL. 10UF-M(SMG) 16V
CY53	0890067R	CD. 33PF-J 50V	C907	0243507R	CD. 330PF-K 500V TAPE
CY75	0800299R	EL. 22UF-M(SMG) 16V (CZ97,CY97,CZ95,CY95)	C908	0800327R	EL. 100UF-M 25V
CY80	0880009R	PF. 0.01UF-K 50V	C909	0890087R	CD. 1000PF-K 50V
			C910	0800336R	EL. 220UF-M(SMG) 25V
		SUB P.W.B. CAPACITORS	C911	AJ00559	CD. 2200PF2KV
			C913	0890083R	CD. 470PF-K 50V
C3F1	0800326R	EL. 100UF-M 16V (CZ97)	C914	0880016R	PF. 0.1UF 50V

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
C915	0880003R	MC. 0.001U	CV35	0880016R	PF. 0.1UF 50V (CZ97,CY97)
C925	0800326R	EL. 100UF-M 16V	CV55	0890077R	CD. 180PF-K 50V (CZ97,CY97)
⚠ C930	AJ00583F	CD. 2200P 250V	CY70	0800291R	EL. 10UF-M(SMG) 16V (CZ97)
C931	0800327R	EL. 100UF-M 25V			
C935	0800363N	EL. 1000UF 35V			**MAIN P.W.B. DIODES**
C936	0253862	EL. 220UF-M 160V			
C938	AL01131R	EL. (2200UF16V)	D001	CH02021M	DI. 1SS33 T-72
C939	0800333R	EL.220UF-M 6.3V	D003	CH02021M	DI. 1SS33 T-72
C940	0880016R	PF. 0.1UF 50V	D004	CH02021M	DI. 1SS33 T-72
C941	0800279R	EL. 1.0UF-M(SMG) 50V	D005	CH02021M	DI. 1SS33 T-72
C942	0800333R	EL.220UF-M 6.3V	D006	CH02021M	DI. 1SS33 T-72
C945	0800333R	EL.220UF-M 6.3V	D007	CH02021M	DI. 1SS33 T-72
C946	0800336R	EL. 220UF-M(SMG) 25V	D008	CH02021M	DI. 1SS33 T-72
C947	0800324R	EL. 100UF-M(SMG) 6.3V	D009	CH02021M	DI. 1SS33 T-72 (CZ97,CY97)
C948	0800326R	EL. 100UF-M 16V	D00C	2339867M	ZD. HZS-9-C1 TAPE (SI.200MA) (CZ97/95/93)
C953	0800326R	EL. 100UF-M 16V	D00F	CH02021M	DI. 1SS33 T-72
C954	0880009R	PF. 0.01UF-K 50V	D00H	2339867M	ZD. HZS-9-C1 TAPE (SI.200MA) (CZ97/95/93)
C956	0244216	CD. 2700PF-K 2KV	D00J	CH02021M	DI. 1SS33 T-72
C959	0800299R	EL. 22UF-M(SMG) 16V	D010	CH02021M	DI. 1SS33 T-72
C960	0800336R	EL. 220UF-M(SMG) 25V	D020	CH02021M	DI. 1SS33 T-72
C961	0243507R	CD. 330PF-K 500V TAPE	D022	CH02021M	DI. 1SS33 T-72
C983	0880016R	PF. 0.1UF 50V	D05A	CH02021M	DI. 1SS33 T-72
C993	0243507R	CD. 330PF-K 500V TAPE	D099	CH02021M	DI. 1SS33 T-72 (CZ97,CY97)
CA70	0800317R	EL. 47UF-M(SMG) 16V (CZ97)	D101	2339837M	ZD. HZS-5C1 TAPE
CA71	0800291R	EL. 10UF-M(SMG) 16V (CZ97)	D102	2339971M	ZD. HZS33-1 TA
CA72	0800291R	EL. 10UF-M(SMG) 16V (CZ97)	D103	2339837M	ZD. HZS-5C1 TAPE (CZ97,CY97,CZ95,CY95)
CM02	0880009R	PF. 0.01UF-K 50V (CZ97/95/93)	D154	2339868M	ZD. HZS9C2 TAPE (CZ97,CY97,CZ95,CY95)
CMF1	0800291R	EL. 10UF-M(SMG) 16V (CZ97/95/93)	D393	2339868M	ZD. HZS9C2 TAPE (CZ97,CY97)
CMF2	0800326R	EL. 100UF-M 16V (CZ97/95/93)	D394	2339868M	ZD. HZS9C2 TAPE (CZ97,CY97)
CMF3	0284623R	EL. 1UF-SME(BP) 50V (CZ97/95/93)	D401	2339812M	ZD. HZS3A2 TA (SI.200MA)
CV01	0800277R	EL. 0.47UF-M 50V (CZ97,CY97)	D402	2339812M	ZD. HZS3A2 TA (SI.200MA)
CV05	0800326R	EL. 100UF-M 16V (CZ97,CY97)	D403	CH02021M	DI. 1SS33 T-72
CV06	0880009R	PF. 0.01UF-K 50V (CZ97,CY97)	D406	CH02021M	DI. 1SS33 T-72
CV09	0890074R	CD. 100PF-J 50V (CZ97,CY97)	D410A	2339812M	ZD. HZS3A2 TA (SI.200MA)
CV10	0244541F	CD. 0.01MF-K B 500V (CZ97,CY97)	D411	2339812M	ZD. HZS3A2 TA (SI.200MA)
CV11	0890074R	CD. 100PF-J 50V (CZ97,CY97)	D412	CH02021M	DI. 1SS33 T-72
CV12	0244509R	CD. 4700PF-KB B 500V (CZ97,CY97)	D421	CH02021M	DI. 1SS33 T-72
CV13	AL00009R	EL. 47UF 160V (CZ97,CY97)	D422	CH02021M	DI. 1SS33 T-72
CV14	AL00009R	EL. 47UF 160V (CZ97,CY97)	D423	CH02021M	DI. 1SS33 T-72
CV15	0253957F	EL. 22UF-M 160V (CZ97,CY97)	D424	CH02021M	DI. 1SS33 T-72
CV16	0247848R	CD. 56PF-J SL 500V (CZ97,CY97)	D442	CH02021M	DI. 1SS33 T-72
CV17	0800353R	EL.470UF-M 16V (CZ97,CY97)	D4F0	2339868M	ZD. HZS9C2 TAPE (CZ97)
CV18	0800318R	EL. 47UF-M 25V (CZ97,CY97)	D4F1	2339868M	ZD. HZS9C2 TAPE (CZ97)
CV19	AL00009R	EL. 47UF 160V (CZ97,CY97)	D502	CH02021M	DI. 1SS33 T-72
CV20	0244541F	CD. 0.01MF-K B 500V (CZ97,CY97)	D505	2339868M	ZD. HZS9C2 TAPE
CV21	0244171R	CD. 0.01UF-Z F 50V TAPE (CZ97,CY97)	D512	CH02021M	DI. 1SS33 T-72 (CY97/95/93)
CV23	0800291R	EL. 10UF-M(SMG) 16V (CZ97,CY97)	D513	CH02021M	DI. 1SS33 T-72 (CY97/95/93)
CV24	0800317R	EL. 47UF-M(SMG) 16V (CZ97,CY97)	D514	CH02021M	DI. 1SS33 T-72 (CY97/95/93)
CV28	0890076R	CD. 150PF-K 50V (CZ97,CY97)	D515	CH02021M	DI. 1SS33 T-72 (CY97/95/93)

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SYMBOL NO.	PART NO.	PART DESCRIPTION
D516	2339868M	ZD. HZS9C2 TAPE
D517	2339868M	ZD. HZS9C2 TAPE
D518	2339868M	ZD. HZS9C2 TAPE
D519	CH02021M	DI. 1SS33 T-72 (CY97/95/93)
D520	2339837M	ZD. HZS-5C1 TAPE (CZ97,CY97)
D601	CH02001M	DI. 1SR139-400
D602	CH02001M	DI. 1SR139-400
D604	2339849M	ZD. HZS6C3 TA
D605	CH02021M	DI. 1SS33 T-72
D606	2339812M	ZD. HZS3A2 TA (SI.200MA)
D705	CH00031M	DI. AU02V1(280V)
⚠ D707	2339972M	ZD. HZS33-2 TA
⚠ D708	2339953M	ZD. HZS27-3 TA
D709	2339972M	ZD. HZS33-2 TA
D710	CH02021M	DI. 1SS33 T-72
D713	CH02001M	DI. 1SR139-400
⚠ D716	2348511	DI. RS3FS (CZ97/95/93)
⚠ D717	2348511	DI. RS3FS
⚠ D718	2336612M	DI. RU3AM TA
D71A	CH02011M	DI. 1SR153-400
D72A	2339849M	ZD. HZS6C3 TA
D72H	2339851M	ZD. HZS7A1 TAPE (SI.200MA)
D73A	2339846M	ZD. HZS6B3 TA
⚠ D73C	CH02011M	DI. 1SR153-400
D73H	CH00031M	DI. AU02V1(280V)
D741	CH02001M	DI. 1SR139-400
D743	2339834M	ZD. HZS5(B1) TAPE
D745	CH02001M	DI. 1SR139-400
D750	2339868M	ZD. HZS9C2 TAPE
D751	CH02021M	DI. 1SS33 T-72
D753	CH02021M	DI. 1SS33 T-72
D755	2339868M	ZD. HZS9C2 TAPE
D757	CH02021M	DI. 1SS33 T-72
D760	CH02021M	DI. 1SS33 T-72
DS01	2339868M	ZD. HZS9C2 TAPE
DS02	2339551M	DI. ED14(V1) SI 5MA 45V
DY01	CH02021M	DI. 1SS33 T-72 (CZ97,CY97)
		SUB P.W.B. DIODES
D626	CH02021M	DI. 1SS33 T-72 (CZ97/95/93)
D627	CH02021M	DI. 1SS33 T-72
D628	CH02021M	DI. 1SS33 T-72
D719	CH02021M	DI. 1SS33 T-72
D720	CH02021M	DI. 1SS33 T-72
D721	2339971M	ZD. HZS33-1 TA
D722	CH02021M	DI. 1SS33 T-72
D804	CH02021M	DI. 1SS33 T-72
D805	CH02021M	DI. 1SS33 T-72
D806	CH02021M	DI. 1SS33 T-72
D807	CH02021M	DI. 1SS33 T-72
D808	CH02021M	DI. 1SS33 T-72
D809	CH02021M	DI. 1SS33 T-72
D810	CH02021M	DI. 1SS33 T-72
D820	2339601M	ZD. HZS-2 TAPE (ALL) SI 400MW 2.0V
D821	2339601M	ZD. HZS-2 TAPE (ALL) SI 400MW 2.0V
D822	2339601M	ZD. HZS-2 TAPE (ALL) SI 400MW 2.0V
D823	CH02021M	DI. 1SS33 T-72
D825	CH02021M	DI. 1SS33 T-72
D826	CH02021M	DI. 1SS33 T-72
D831	2339868M	ZD. HZS9C2 TAPE
D832	2339868M	ZD. HZS9C2 TAPE
D833	2339868M	ZD. HZS9C2 TAPE
⚠ D901	2342062	DI. D3SBA60-4103
D902	CH02011M	DI. 1SR153-400
D903	2339981M	ZD. HZS36-1 TA
D904	CH02011M	DI. 1SR153-400
D905	CH02011M	DI. 1SR153-400
D906	CH02011M	DI. 1SR153-400
D907	2339912M	DI. HZS18-2 TA
D909	CH02011M	DI. 1SR153-400
D911	CH02011M	DI. 1SR153-400
D921	CH02021M	DI. 1SS33 T-72
D922	CH02021M	DI. 1SS33 T-72
D923	2339843M	ZD. HZS-6 A3 (SI 200MA)
D924	CH02021M	DI. 1SS33 T-72
D926	2339849M	ZD. HZS6C3 TA
D931	CH02001M	DI. 1SR139-400
D932	2338944	DI. FML-G12S (F) (200V) SI 0.04USEC
D934	2349861	DI. FMU-G16S
D936	2338944	DI. FML-G12S (F) (200V) SI 0.04USEC
D937	CH02021M	DI. 1SS33 T-72
D938	CH02021M	DI. 1SS33 T-72
D939	CH02021M	DI. 1SS33 T-72
D940	2339223M	ZD. HZS27 (3L)
D941	CH02021M	DI. 1SS33 T-72
D942	2339882M	ZD. DI. HZS-12(A2) TAPE
D943	CH02021M	DI. 1SS33 T-72
D946	2339868M	ZD. HZS9C2 TAPE
D947	CH02021M	DI. 1SS33 T-72
D951	CH02001M	DI. 1SR139-400
D952	CH02021M	DI. 1SS33 T-72
D953	2339817M	ZD. HZS3C1 TA
D955	CH02021M	DI. 1SS33 T-72
D974	CH02021M	DI. 1SS33 T-72
D975	CH02021M	DI. 1SS33 T-72
D976	CH02001M	DI. 1SR139-400
DA70	2339885M	ZD. HZS12B2 TA (CZ97)

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SYMBOL NO.	PART NO.	PART DESCRIPTION
DA71	2339885M	ZD. HZS12B2 TA (CZ97)
DV01	CH02001M	DI. 1SR139-400 (CZ97,CY97)
DV02	CH02001M	DI. 1SR139-400 (CZ97,CY97)
DV03	CH02001M	DI. 1SR139-400 (CZ97,CY97)
DV04	CH02001M	DI. 1SR139-400 (CZ97,CY97)
DV05	CH02021M	DI. 1SS33 T-72 (CZ97,CY97)
DV06	CH02021M	DI. 1SS33 T-72 (CZ97,CY97)
DV08	2339868M	ZD. HZS9C2 TAPE (CZ97,CY97)
DV10	CH02021M	DI. 1SS33 T-72 (CZ97,CY97)
		MAIN P.W.B. PLUGS AND CONN.
EAN	2974061S	CONNE. 3J L=240 (CZ97/CY97,CZ95,CY95)
ECC	EF00897	CO-01A-A0R0-800
EGM	2964865	CONNE.2P L=330 (CZ97,CY97)
EGND	2956487	CONNE. CO-01C-A0R0-551 (CZ97/95/93)
EGND	2956488	1J MINI-AMPIN CONNECTOR (CY97/95/93)
EVM1	EF06141	7J BOARD-IN CONNE.(430mm) (CZ97,CY97)
EY1	2974163S	6J CONNECTOR L=680
EY2	2976675	4J EH CONNECTOR
		SUB P.W.B. FUSE HOLDERS, CONN.
E851	EY00941	CRT-SOCKET
⚠ E901	EV00903	UL/CSA POWER CORD
EF901	FP00031R	FUSE HOLDER TP00351-51
EF902	FP00031R	FUSE HOLDER TP00351-51
		MAIN P.W.B. PROTECTORS
E601	AZ00102M	PROTECTOR(CRXT491001)
		SUB P.W.B. PROTECTORS
EP91	AZ00109M	PROTECTOR CRXT491007
EP92	AZ00109M	PROTECTOR CRXT491007
		SUB P.W.B. FUSES
⚠ F901	2722359	FUSE AC06A
⚠ F902	2722357	FUSE AC04A
		SUB P.W.B. SPARK GAPS
G801	CJ00071R	SEMICONDUCTOR AG15PC-152FS-K2M
G802	CJ00071R	SEMICONDUCTOR AG15PC-152FS-K2M
G803	CJ00071R	SEMICONDUCTOR AG15PC-152FS-K2M
G804	CJ00071R	SEMICONDUCTOR AG15PC-152FS-K2M

SYMBOL NO.	PART NO.	PART DESCRIPTION
		SUB P.W.B. SPARK GAPS
⚠ G901	2340741	SURGE PROTECTOR DSP-301N-S00B
		SUB P.W.B. ANALOG IC, FILTER
⚠ H901	2793313	CP-EXN-G131P365L
HM01	CZ00641	GP1U281Q (CZ97/95/93)
		MAIN PWB. INTEGRATED CIRCUITS
I001	CP06501	IC MN102L35GHG (CZ97,CY97,CZ95CY95)
I001	CP06502	IC MN102L35GHH (CZ93,CY93)
I002	CP05271U	IC M24C08-BN6
I003	CP05011R	ANALOG MONOLITHIC IC (PST994D-T)
I004	2020341	IC MM1111XS (CZ97,CY97,CZ95,CY95)
I005	CP05571	IC BA17805
⚠ I403	CP04061	ANALOG MONOLITHIC IC (LA4603)
I501	CP03552U	IC TA1222BN
I502	CP06361U	ANA. MONOLITHIC IC BU4053BC (CZ97,CY97)
⚠ I601	2003541	IC LA7838
IS01	CP04042	UPC1854ACT
IS02	2004901	IC TA8776N
IS03	5350601	NJM4558D IC (CZ97,CY97)
IS04	5350601	NJM4558D IC (CZ97,CY97)
IY01	2020452	ANALOG MONOLITHIC IC (CXA1545AS)
IY02	2020341	IC MM1111XS (CZ97,CY97)
		SUB P.W.B. INTEGRATED CIRCUITS
⚠ I621	5350601	NJM4558D IC
⚠ I901	CZ00862	STR-F6626(LF1351)
⚠ I902	2000465	IC PS2501-1 (KC/LC)
⚠ I903	2000465	IC PS2501-1 (KC/LC)
⚠ I904	2000465	IC PS2501-1 (KC/LC)
⚠ I905	2000465	IC PS2501-1 (KC/LC)
I931	2381345	IC SE140N
		MAIN P.W.B. JACKS,ECT
J30F	2673602	US13 (CY97)
JS01	2693853	TERMINAL(TERMINAL BOARD)
JS02	2693853	TERMINAL(BOARD) (CZ97,CY97,CZ95,CY95)
JY01	2693886	TERMINAL(TERMINAL BOARD) (CZ97,CY97)
JY01	ES00141	8P A/V JACK (CZ95,CY95,CZ93,CY93)
JY02	ES00134	5P JACK(FOR YUV) (CZ97,CY97)

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SYMBOL NO.	PART NO.	PART DESCRIPTION
		SUB P.W.B. JACKS
J31F	ES00023	JACK (CZ97)
		MAIN P.W.B. INDUCTORS\COILS
L001	2122253M	COIL-AXIAL 100UH-K
L002	BH00697R	COIL 100UH
L005	BH00697R	COIL 100UH (CZ97/95/93)
L006	BH00697R	COIL 100UH
L010	BH00697R	COIL 100UH
L011	BH00697R	COIL 100UH (CY97/95/93)
L012	BH00697R	COIL 100UH
L05A	BH00697R	COIL 100UH
L101	BH00697R	COIL 100UH
L102	BH00697R	COIL 100UH
L103	BH00697R	COIL 100UH
L104	BH00697R	COIL 100UH
L105	BH00697R	COIL 100UH
L106	BH00697R	COIL 100UH
L107	BH00697R	COIL 100UH
L401	BH00204R	FILTER COIL 18UH
L504	BH00697R	COIL 100UH
L505	BH00697R	COIL 100UH
L506	BH00697R	COIL 100UH
L507	BH00697R	COIL 100UH
L509	BH00697R	COIL 100UH
L511	BH00697R	COIL 100UH (CZ97,CY97)
L550	BH00697R	COIL 100UH
L701	2122652M	FERRITE CORE
⚠ L702	BZ00422	H.LINEARITY COIL 18UH W.COAT (CZ97/95/93)
L702	BZ03011	LINEARITY COIL 20UH (CY97/95/93)
L703	2771893	FERITE BEADS CORE (005)
⚠ L704	BH01151	COIL 1000UH 1A
L705	2123781	FILTER COIL EL 100UH-K
L709	BH01366R	COIL 27UH FLR88
L710	BH00688R	COIL 22UH
L711	2122652M	FERRITE CORE
L71A	2122652M	FERRITE CORE
LS01	BH00697R	COIL 100UH
LS03	BH00697R	COIL 100UH (CZ97,CY97)
LY01	BH00697R	COIL 100UH
LY08	BH00697R	COIL 100UH
LY09	BH00697R	COIL 100UH
LY10	BH00697R	COIL 100UH
LY11	BH00697R	COIL 100UH

SYMBOL NO.	PART NO.	PART DESCRIPTION
		SUB P.W.B. INDUCTORS\COILS
L854	2122254M	COIL-AXIAL 120UH-K
L855	2122254M	COIL-AXIAL 120UH-K
L856	2122254M	COIL-AXIAL 120UH-K
L857	2123468M	FERRITE BEADS CORE LEAD 0.8MH
L858	2123468M	FERRITE BEADS CORE LEAD 0.8MH
L859	2123468M	FERRITE BEADS CORE LEAD 0.8MH
L860	2123468M	FERRITE BEADS CORE LEAD 0.8MH
L861	2123468M	FERRITE BEADS CORE LEAD 0.8MH
L862	2123468M	FERRITE BEADS CORE LEAD 0.8MH
L863	2123468M	FERRITE BEADS CORE LEAD 0.8MH
⚠ L901	BZ02481	LINE FILTER COIL 4.7MH (DELTA)
⚠ L902	BZ02481	LINE FILTER COIL 4.7MH (DELTA)
L904	2124365	DC NOISE FILTER
L905	2122652M	FERRITE CORE
L906	2122652M	FERRITE CORE
L907	2122652M	FERRITE CORE
L908	2122652M	FERRITE CORE
L909	2122652M	FERRITE CORE
L913	2122652M	FERRITE CORE
L914	2122652M	FERRITE CORE
L932	2122652M	FERRITE CORE
L933	2122652M	FERRITE CORE
L934	2122652M	FERRITE CORE
L936	2122652M	FERRITE CORE
L950	BZ02521	DC NOISE FILTER
LV01	BH00679R	COIL 4.7UH (CZ97,CY97)
LV02	2123468M	FERRITE BEADS CORE LEAD 0.8MH(CZ97,CY97)
LV03	2123468M	FERRITE BEADS CORE LEAD 0.8MH(CZ97,CY97)
LV04	2123468M	FERRITE BEADS CORE LEAD 0.8MH(CZ97,CY97)
		MAIN P.W.B. TRANSISTORS
Q001	2312941M	TR. 2SC3413BC/1740S Q/R TA
Q002	2312941M	TR. 2SC3413BC/1740S Q/R TA
Q003	2312941M	TR. 2SC3413BC/1740S Q/R TA
Q004	2312941M	TR. 2SC3413BC/1740S Q/R TA
Q007	2312941M	TR. 2SC3413BC/1740S Q/R TA
Q009	2312941M	TR. 2SC3413BC/1740S Q/R TA
Q00A	2312941M	TR. 2SC3413BC/1740S Q/R TA
Q00B	2325703M	TR. (2SA854S)
Q010	2312941M	TR. 2SC3413BC/1740S Q/R TA
Q011	2312941M	TR. 2SC3413BC/1740S Q/R TA
Q012	2312941M	TR. 2SC3413BC/1740S Q/R TA
Q013	2312941M	TR. 2SC3413BC/1740S Q/R TA (CZ97,CY97)
Q014	2312941M	TR. 2SC3413BC/1740S Q/R TA
Q015	2312941M	TR. 2SC3413BC/1740S Q/R TA

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
Q016	2312941M	TR. 2SC3413BC/1740S Q/R TA	Q717	CF02301	TR. 2SD2396
Q017	2312941M	TR. 2SC3413BC/1740S Q/R TA	Q718	2325703M	TR. (2SA854S)
Q020	2312941M	TR. 2SC3413BC/1740S Q/R TA	Q720	2312941M	TR. 2SC3413BC/1740S Q/R TA
Q021	2312941M	TR. 2SC3413BC/1740S Q/R TA	Q752	2323434	TR. 2SC1983 (O/Y)
Q022	2312941M	TR. 2SC3413BC/1740S Q/R TA	Q754	2312941M	TR. 2SC3413BC/1740S Q/R TA
Q101	2312941M	TR. 2SC3413BC/1740S Q/R TA	QC01	2312941M	TR. 2SC3413BC/1740S Q/R TA
Q102	2312941M	TR. 2SC3413BC/1740S Q/R TA (CZ/Y97,CZ/Y95)	QC03	2312941M	TR. 2SC3413BC/1740S Q/R TA
Q151	2312941M	TR. 2SC3413BC/1740S Q/R TA (CZ/Y97,CZ/Y95)	QC04	2312941M	TR. 2SC3413BC/1740S Q/R TA
Q3F0	2312941M	TR. 2SC3413BC/1740S Q/R TA (CY97)	QS01	2312941M	TR. 2SC3413BC/1740S Q/R TA (CZ97,CY97)
Q401	2325702M	TR.2SA854S TAPE (Q/R) SI 200MHZ300MW	QS02	2312941M	TR. 2SC3413BC/1740S Q/R TA (CZ97,CY97)
Q402	2312941M	TR. 2SC3413BC/1740S Q/R TA	QS03	2312941M	TR. 2SC3413BC/1740S Q/R TA (CZ97,CY97)
Q403	2325702M	TR.2SA854S TAPE (Q/R) SI 200MHZ300MW	QS04	2312941M	TR. 2SC3413BC/1740S Q/R TA (CZ97,CY97)
Q404	2312941M	TR. 2SC3413BC/1740S Q/R TA	QY02	2312941M	TR. 2SC3413BC/1740S Q/R TA (CZ97,CY97)
Q405	2312941M	TR. 2SC3413BC/1740S Q/R TA	QY08	2312941M	TR. 2SC3413BC/1740S Q/R TA
Q406	2312941M	TR. 2SC3413BC/1740S Q/R TA	QY20	2312941M	TR. 2SC3413BC/1740S Q/R TA
Q410	2312941M	TR. 2SC3413BC/1740S Q/R TA	QY50	2312941M	TR. 2SC3413BC/1740S Q/R TA
Q411	2312941M	TR. 2SC3413BC/1740S Q/R TA	QY51	2312941M	TR. 2SC3413BC/1740S Q/R TA
Q412	2312941M	TR. 2SC3413BC/1740S Q/R TA	QY52	2312941M	TR. 2SC3413BC/1740S Q/R TA
Q500	2312941M	TR. 2SC3413BC/1740S Q/R TA	QY53	2312941M	TR. 2SC3413BC/1740S Q/R TA
Q501	2312941M	TR. 2SC3413BC/1740S Q/R TA	QY54	2312941M	TR. 2SC3413BC/1740S Q/R TA
Q502	2325703M	TR. (2SA854S)	QY55	2312941M	TR. 2SC3413BC/1740S Q/R TA (CZ/Y97,CZ/Y95)
Q503	2325703M	TR. (2SA854S)	QY56	2312941M	TR. 2SC3413BC/1740S Q/R TA (CZ97,CY97)
Q504	2325703M	TR. (2SA854S)			
Q505	2312941M	TR. 2SC3413BC/1740S Q/R TA			**SUB P.W.B. TRANSISTORS**
Q506	2325702M	TR.2SA854S TAPE (Q/R) SI 200MHZ300MW			
Q511	2312941M	TR. 2SC3413BC/1740S Q/R TA (CZ97,CY97)	Q3F0	2312941M	TR. 2SC3413BC/1740S Q/R TA (CZ97)
Q513	2312941M	TR. 2SC3413BC/1740S Q/R TA (CZ97,CY97)	Q650	2325721M	TR. 2SC1740S (Q/R/S/E) TAPE
Q514	2312941M	TR. 2SC3413BC/1740S Q/R TA (CZ97,CY97)	Q651	2325721M	TR. 2SC1740S (Q/R/S/E) TAPE
Q515	2325703M	TR. (2SA854S)	Q750	2325721M	TR. 2SC1740S (Q/R/S/E) TAPE
Q516	2325703M	TR. (2SA854S)	Q751	2325703M	TR. (2SA854S)
Q517	2325703M	TR. (2SA854S)	Q851	2315491	TR. 2SC4544
Q519	2312941M	TR. 2SC3413BC/1740S Q/R TA (CZ97,CY97)	Q852	2325721M	TR. 2SC1740S (Q/R/S/E) TAPE
Q520	2325703M	TR. (2SA854S)	Q854	2315491	TR. 2SC4544
Q521	2312941M	TR. 2SC3413BC/1740S Q/R TA (CZ97,CY97)	Q855	2325721M	TR. 2SC1740S (Q/R/S/E) TAPE
Q522	2325703M	TR. (2SA854S) (CZ97,CY97)	Q857	2315491	TR. 2SC4544
Q523	2312941M	TR. 2SC3413BC/1740S Q/R TA (CZ97,CY97)	Q858	2325721M	TR. 2SC1740S (Q/R/S/E) TAPE
Q525	2312941M	TR. 2SC3413BC/1740S Q/R TA	Q859	2325703M	TR. (2SA854S)
Q550	2312941M	TR. 2SC3413BC/1740S Q/R TA (CY97/95/93)	Q901	2323782R	THYRISTOR 03P2M(TA)
Q5P1	2312941M	TR. 2SC3413BC/1740S Q/R TA	Q902	2325721M	TR. 2SC1740S (Q/R/S/E) TAPE
Q701	2323523M	TR. 2SD789 D TAPE	Q904	2325721M	TR. 2SC1740S (Q/R/S/E) TAPE
⚠ Q702	CF01541F	2SC2514 F	Q905	2323782R	THYRISTOR 03P2M(TA)
Q703	2325703M	TR. (2SA854S)	Q906	2325721M	TR. 2SC1740S (Q/R/S/E) TAPE
Q704	2312941M	TR. 2SC3413BC/1740S Q/R TA	Q907	2325703M	TR. (2SA854S)
Q705	2312941M	TR. 2SC3413BC/1740S Q/R TA	Q908	2327883M	TR. 2SA1207 (S/T) SI 150MHZ600MW
Q706	2325703M	TR. (2SA854S)	Q909	2325703M	TR. (2SA854S)
Q708	2312941M	TR. 2SC3413BC/1740S Q/R TA	Q911	2323434	TR. 2SC1983 (O/Y)
Q70A	2326021M	TR. 2SC1741S P/R/Q (TP) 250MHZ 300MW	Q913	CF02301	TR. 2SD2396
Q70H	2323523M	TR. 2SD789 D TAPE	Q914	CF02301	TR. 2SD2396
Q710	2325703M	TR. (2SA854S)	Q915	CF10833R	TR. 2SA933AS S TP

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REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION
Q916	2325721M	TR. 2SC1740S (Q/R/S/E) TAPE
Q921	2326022M	TR.2SC1741S Q/R TZ
Q922	2325721M	TR. 2SC1740S (Q/R/S/E) TAPE
Q924	2325721M	TR. 2SC1740S (Q/R/S/E) TAPE
QA70	2325721M	TR. 2SC1740S (Q/R/S/E) TAPE (CZ97)
QA71	2325721M	TR. 2SC1740S (Q/R/S/E) TAPE (CZ97)
QMF1	2326021M	TR. 2SC1741S P/R/Q (TP) 250MHZ 300MW (CZ97/95/93)
QV01	2325721M	TR. 2SC1740S (Q/R/S/E) TAPE (CZ97,CY97)
QV02	2325721M	TR. 2SC1740S (Q/R/S/E) TAPE (CZ97,CY97)
QV03	2325721M	TR. 2SC1740S (Q/R/S/E) TAPE (CZ97,CY97)
QV04	2325721M	TR. 2SC1740S (Q/R/S/E) TAPE (CZ97,CY97)
QV05	2325721M	TR. 2SC1740S (Q/R/S/E) TAPE (CZ97,CY97)
QV06	2327772M	TR.2SC3413 TAPE (B/C) SI 200MHZ300MW (CZ97,CY97)
QV07	2326021M	TR. 2SC1741S P/R/Q (TP) 250MHZ 300MW (CZ97,CY97)
QV08	2321351M	TR. 2SA836/844D/E 100MA 200MW 200MHZSI TAPE (CZ97,CY97)
QV09	2315381	TR. 2SA1837 (CZ97,CY97)
QV10	2315391	TR. 2SC4793 (CZ97,CY97)
QV11	2325721M	TR. 2SC1740S (Q/R/S/E) TAPE (CZ97,CY97)
QV12	2325721M	TR. 2SC1740S (Q/R/S/E) TAPE (CZ97,CY97)
		MAIN P.W.B. RESISTORS
R001	0700042M	CF. 1/16W 1.2K-JB (CY97/95/93)
R002	0700041M	CF. 1/16W 1.0K-JB (CY97/95/93)
R003	0700043M	CF. 1/16W 1.5K-JB (CY97/95/93)
R004	0700046M	CF. 1/16W 2.7K-JB (CY97/95/93)
R005	0700049M	CF. 1/16W 4.7K-JB (CY97/95/93)
R006	0700054M	CF. 1/16W 10K-JB (CY97/95/93)
R007	0700041M	CF. 1/16W 1.0K-JB
R008	0700058M	CF. 1/16W 22K-JB
R00A	0700027M	CF. 1/16W 100-JB
R00C	0700027M	CF. 1/16W 100-JB
R00E	0700054M	CF. 1/16W 10K-JB
R00F	0700054M	CF. 1/16W 10K-JB
R00G	0700044M	CF. 1/16W 1.8K-JB
R00H	0700044M	CF. 1/16W 1.8K-JB
R00J	0700027M	CF. 1/16W 100-JB
R00K	0700027M	CF. 1/16W 100-JB
R00L	0700027M	CF. 1/16W 100-JB
R00M	0700041M	CF. 1/16W 1.0K-JB
R00N	0700037M	CF. 1/16W 560-JB
R00P	0700053M	CF. 1/16W 8.2K-JB
R00Q	0700031M	CF. 1/16W 180-JB
R00S	0700067M	CF. 1/16W 100K-JB
R00T	0700051M	CF. 1/16W 5.6K-JB
R00U	0700054M	CF. 1/16W 10K-JB
R00W	0700054M	CF. 1/16W 10K-JB
R00Y	0700063M	CF. 1/16W 47K-JB
R00Z	0700054M	CF. 1/16W 10K-JB
R010	0700054M	CF. 1/16W 10K-JB
R011	0700041M	CF. 1/16W 1.0K-JB
R012	0700049M	CF. 1/16W 4.7K-JB
R013	0700041M	CF. 1/16W 1.0K-JB (CZ97,CY97,CZ95,CY95)
R014	0700041M	CF. 1/16W 1.0K-JB
R015	0700037M	CF. 1/16W 560-JB
R016	0700037M	CF. 1/16W 560-JB
R017	0700034M	CF. 1/16W 330-JB
R018	0700024M	CF. 1/16W 56-J
R019	0700024M	CF. 1/16W 56-J
R01C	0700041M	CF. 1/16W 1.0K-JB (CZ97,CY97)
R01K	0700063M	CF. 1/16W 47K-JB
R01M	0700058M	CF. 1/16W 22K-JB
R01N	0100065M	CF. 1/8W 1K-JB
R020	0700024M	CF. 1/16W 56-J
R021	0700033M	CF. 1/16W 270-JB
R022	0700029M	CF. 1/16W 150-JB
R023	0700045M	CF. 1/16W 2.2K-JB
R024	0700064M	CF. 1/16W 56K-JB
R025	0700051M	CF. 1/16W 5.6K-JB
R026	0700054M	CF. 1/16W 10K-JB
R027	0100065M	CF. 1/8W 1K-JB (CZ97/95/93)
R029	0700054M	CF. 1/16W 10K-JB
R030	0700027M	CF. 1/16W 100-JB
R031	0700042M	CF. 1/16W 1.2K-JB
R032	0100065M	CF. 1/8W 1K-JB (CZ97/95/93)
R033	0100067M	CF. 1/8W 1.2K-JB (CZ97/95/93)
R034	0700041M	CF. 1/16W 1.0K-JB
R035	0700054M	CF. 1/16W 10K-JB
R036	0700041M	CF. 1/16W 1.0K-JB
R037	0700067M	CF. 1/16W 100K-JB
R038	0700051M	CF. 1/16W 5.6K-JB
R039	0100123M	CF. 1/8W 270K-JB
R040	0700051M	CF. 1/16W 5.6K-JB
R041	0700051M	CF. 1/16W 5.6K-JB
R042	0700051M	CF. 1/16W 5.6K-JB
R043	0700027M	CF. 1/16W 100-JB
R044	0700027M	CF. 1/16W 100-JB
R045	0700027M	CF. 1/16W 100-JB
R046	0700043M	CF. 1/16W 1.5K-JB
R047	0700051M	CF. 1/16W 5.6K-JB
R048	0700063M	CF. 1/16W 47K-JB
R050	0700027M	CF. 1/16W 100-JB
R051	0700028M	CF. 1/16W 120-JB
R052	0700028M	CF. 1/16W 120-JB

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R053	0700028M	CF. 1/16W 120-JB	R09H	0700067M	CF. 1/16W 100K-JB
R054	0700054M	CF. 1/16W 10K-JB	R0A1	0700027M	CF. 1/16W 100-JB
R055	0700041M	CF. 1/16W 1.0K-JB	R0A2	0700037M	CF. 1/16W 560-JB
R057	0700054M	CF. 1/16W 10K-JB	R0F2	0700054M	CF. 1/16W 10K-JB
R05A	0700044M	CF. 1/16W 1.8K-JB	R0F3	0700055M	CF. 1/16W 12K-JB
R05C	0700044M	CF. 1/16W 1.8K-JB	R0F9	0700054M	CF. 1/16W 10K-JB
R063	0700041M	CF. 1/16W 1.0K-JB	R0FA	0700041M	CF. 1/16W 1.0K-JB
R064	0700041M	CF. 1/16W 1.0K-JB	R0FC	0700066M	CF. 1/16W 82K-JB
R065	0700041M	CF. 1/16W 1.0K-JB	R0HA	0700054M	CF. 1/16W 10K-JB
R066	0700041M	CF. 1/16W 1.0K-JB	R0K1	0700063M	CF. 1/16W 47K-JB
R067	0700041M	CF. 1/16W 1.0K-JB (CZ97,CY97,CZ95,CY95)	R0K2	0700059M	CF. 1/16W 27K-JB
R068	0700041M	CF. 1/16W 1.0K-JB	R0K3	0700059M	CF. 1/16W 27K-JB
R069	0700037M	CF. 1/16W 560-JB	R0K4	0700055M	CF. 1/16W 12K-JB
R070	0700054M	CF. 1/16W 10K-JB	R0K5	0700055M	CF. 1/16W 12K-JB
R071	0700027M	CF. 1/16W 100-JB	R0K6	0700049M	CF. 1/16W 4.7K-JB
R072	0700041M	CF. 1/16W 1.0K-JB (CZ97,CY97)	R101	0700032M	CF. 1/16W 220-JB
R073	0700041M	CF. 1/16W 1.0K-JB	R102	0700032M	CF. 1/16W 220-JB
R074	0700041M	CF. 1/16W 1.0K-JB	R103	0700041M	CF. 1/16W 1.0K-JB
R075	0700041M	CF. 1/16W 1.0K-JB	R104	0700041M	CF. 1/16W 1.0K-JB
R076	0700041M	CF. 1/16W 1.0K-JB (CZ97,CY97,CZ95,CY95)	R105	0188118M	CF. 1/2W 120-JB
R077	0700041M	CF. 1/16W 1.0K-JB	R107	0700041M	CF. 1/16W 1.0K-JB
R078	0700027M	CF. 1/16W 100-JB	R109	0100061M	CF. 1/8W 680-JB
R079	0700027M	CF. 1/16W 100-JB	R110	0700032M	CF. 1/16W 220-JB (CZ97,CY97,CZ95,CY95)
R080	0700041M	CF. 1/16W 1.0K-JB	R111	0700032M	CF. 1/16W 220-JB (CZ97,CY97,CZ95,CY95)
R081	0700048M	CF. 1/16W 3.9K-JB	R112	0188118M	CF. 1/2W 120-JB (CZ97,CY97,CZ95,CY95)
R082	0700051M	CF. 1/16W 5.6K-JB	R116	0700041M	CF. 1/16W 1.0K-JB (CZ97,CY97,CZ95,CY95)
R083	0700054M	CF. 1/16W 10K-JB	R120	0700027M	CF. 1/16W 100-JB (CZ97,CY97,CZ95,CY95)
R084	0700054M	CF. 1/16W 10K-JB	R122	0100061M	CF. 1/8W 680-JB (CZ97,CY97,CZ95,CY95)
R085	0700063M	CF. 1/16W 47K-JB	R151	0700063M	CF. 1/16W 47K-JB (CZ97,CY97,CZ95,CY95)
R086	0700045M	CF. 1/16W 2.2K-JB	R152	0700058M	CF. 1/16W 22K-JB (CZ97,CY97,CZ95,CY95)
R087	0700058M	CF. 1/16W 22K-JB	R153	0700054M	CF. 1/16W 10K-JB (CZ97,CY97,CZ95,CY95)
R088	0700054M	CF. 1/16W 10K-JB (CZ97,CY97)	R297	0100041M	CF. 1/8W 100-JB (CZ97,CY97)
R089	0700054M	CF. 1/16W 10K-JB (CZ97,CY97)	R298	0100041M	CF. 1/8W 100-JB (CZ97,CY97)
R08T	0700041M	CF. 1/16W 1.0K-JB	R3F0	0100038M	CF. 1/8W 75-JB (CY97)
R090	0700041M	CF. 1/16W 1.0K-JB	R3F1	0100041M	CF. 1/8W 100-JB (CZ97,CY97)
R091	0700041M	CF. 1/16W 1.0K-JB	R3F2	0700063M	CF. 1/16W 47K-JB (CY97)
R092	0700042M	CF. 1/16W 1.2K-JB	R3F3	0100041M	CF. 1/8W 100-JB (CY97)
R093	0700027M	CF. 1/16W 100-JB	R3F4	0700059M	CF. 1/16W 27K-JB (CY97)
R094	0700027M	CF. 1/16W 100-JB	R3F5	0700038M	CF. 1/16W 680-JB (CY97)
R095	0700049M	CF. 1/16W 4.7K-JB	R401	0700041M	CF. 1/16W 1.0K-JB
R096	0700049M	CF. 1/16W 4.7K-JB	R402	0700041M	CF. 1/16W 1.0K-JB
R097	0700058M	CF. 1/16W 22K-JB	R403	0700041M	CF. 1/16W 1.0K-JB
R098	0700048M	CF. 1/16W 3.9K-JB	R404	0700062M	CF. 1/16W 39K-JB
R099	0700061M	CF. 1/16W 33K-JB	R405	0700041M	CF. 1/16W 1.0K-JB
R09A	0700041M	CF. 1/16W 1.0K-JB	R406	0700054M	CF. 1/16W 10K-JB
R09C	0100123M	CF. 1/8W 270K-JB	R407	0700041M	CF. 1/16W 1.0K-JB
R09E	0700041M	CF. 1/16W 1.0K-JB	R408	0700041M	CF. 1/16W 1.0K-JB
R09F	0700063M	CF. 1/16W 47K-JB	R409	0700041M	CF. 1/16W 1.0K-JB
R09G	0700054M	CF. 1/16W 10K-JB	R40A	0700041M	CF. 1/16W 1.0K-JB

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R40C	0700054M	CF. 1/16W 10K-JB	R532	0700049M	CF. 1/16W 4.7K-JB
R40H	0700062M	CF. 1/16W 39K-JB	R538	0700058M	CF. 1/16W 22K-JB (CZ97,CY97)
R419	0700036M	CF. 1/16W 470-JB	R539	0700041M	CF. 1/16W 1.0K-JB (CZ97,CY97)
R41A	0700036M	CF. 1/16W 470-JB	R540	0700054M	CF. 1/16W 10K-JB
R420	0700032M	CF. 1/16W 220-JB	R541	0700027M	CF. 1/16W 100-JB (CZ97,CY97)
R421	0700032M	CF. 1/16W 220-JB	R542	0700056M	CF. 1/16W 15K-JB (CZ97,CY97)
R423	0100113M	CF. 1/8W 100K-JB	R546	0700033M	CF. 1/16W 270-JB (CZ97,CY97)
R424	0100113M	CF. 1/8W 100K-JB	R547	0700054M	CF. 1/16W 10K-JB (CZ97,CY97)
R425	0700041M	CF. 1/16W 1.0K-JB	R548	0700032M	CF. 1/16W 220-JB (CZ97,CY97)
R426	0700041M	CF. 1/16W 1.0K-JB	R549	0700058M	CF. 1/16W 22K-JB
R430	0700041M	CF. 1/16W 1.0K-JB	R556	0700046M	CF. 1/16W 2.7K-JB
R431	0700041M	CF. 1/16W 1.0K-JB	R557	0700054M	CF. 1/16W 10K-JB
R440	0700053M	CF. 1/16W 8.2K-JB	R558	0700027M	CF. 1/16W 100-JB
R441	0700053M	CF. 1/16W 8.2K-JB	R559	0700041M	CF. 1/16W 1.0K-JB
R442	0700042M	CF. 1/16W 1.2K-JB	R560	0700036M	CF. 1/16W 470-JB
R443	0700042M	CF. 1/16W 1.2K-JB	R561	0700034M	CF. 1/16W 330-JB
R444	0700041M	CF. 1/16W 1.0K-JB	R562	0700027M	CF. 1/16W 100-JB
R445	0100053M	CF. 1/8W 330-JB	R563	0700035M	CF. 1/16W 390-JB
R446	0700041M	CF. 1/16W 1.0K-JB	R564	0700033M	CF. 1/16W 270-JB
R447	0700052M	CF. 1/16W 6.8K-JB	R568	0700027M	CF. 1/16W 100-JB
R450	0100077M	CF. 1/8W 3.3K-JB	R569	0700057M	CF. 1/16W 18K-JB
R451	0100077M	CF. 1/8W 3.3K-JB	R570	0700034M	CF. 1/16W 330-JB
R45A	0700049M	CF. 1/16W 4.7K-JB	R571	0700034M	CF. 1/16W 330-JB
R45H	0700049M	CF. 1/16W 4.7K-JB	R572	0700027M	CF. 1/16W 100-JB
R461	0700054M	CF. 1/16W 10K-JB	R573	0700027M	CF. 1/16W 100-JB
R462	0700058M	CF. 1/16W 22K-JB	R574	0700027M	CF. 1/16W 100-JB
R463	0700054M	CF. 1/16W 10K-JB	R576	0700032M	CF. 1/16W 220-JB
R4F0	0100113M	CF. 1/8W 100K-JB (CY97)	R577	0700032M	CF. 1/16W 220-JB
R4F1	0100065M	CF. 1/8W 1K-JB (CZ97,CY97)	R578	0700032M	CF. 1/16W 220-JB
R4F2	0100065M	CF. 1/8W 1K-JB (CZ97,CY97)	R579	0188125M	CF. 390-J 1/2W
R4F3	0100113M	CF. 1/8W 100K-JB (CY97)	R580	0188125M	CF. 390-J 1/2W
R500	0700058M	CF. 1/16W 22K-JB (CZ97,CY97)	R581	0188125M	CF. 390-J 1/2W
R502	0700027M	CF. 1/16W 100-JB (CZ97,CY97)	R582	0100049M	CF. 1/8W 220-JB
R503	0700061M	CF. 1/16W 33K-JB	R583	0100049M	CF. 1/8W 220-JB
R505	0700039M	CF. 1/16W 820-JB (CZ97,CY97)	R584	0100049M	CF. 1/8W 220-JB
R508	0700029M	CF. 1/16W 150-JB	R585	0700027M	CF. 1/16W 100-JB
R510	0700044M	CF. 1/16W 1.8K-JB	R586	0700054M	CF. 1/16W 10K-JB
R511	0700048M	CF. 1/16W 3.9K-JB	R587	0700027M	CF. 1/16W 100-JB
R517	0700058M	CF. 1/16W 22K-JB (CZ97,CY97)	R588	0700041M	CF. 1/16W 1.0K-JB
R518	0700041M	CF. 1/16W 1.0K-JB (CZ97,CY97)	R590	0700056M	CF. 1/16W 15K-JB (CZ97,CY97)
R520	0700056M	CF. 1/16W 15K-JB (CZ97,CY97)	R591	0700032M	CF. 1/16W 220-JB (CZ97,CY97)
R522	0700027M	CF. 1/16W 100-JB (CZ97,CY97)	R592	0700039M	CF. 1/16W 820-JB (CZ97,CY97)
R523	0700028M	CF. 1/16W 120-JB (CZ97,CY97)	R594	0700039M	CF. 1/16W 820-JB (CZ97,CY97)
R524	0700036M	CF. 1/16W 470-JB (CZ97,CY97)	R595	0700036M	CF. 1/16W 470-JB (CZ97,CY97)
R525	0700032M	CF. 1/16W 220-JB (CZ97,CY97)	R596	0700018M	CF. 1/16W 22-J (CY97/95/93)
R526	0700027M	CF. 1/16W 100-JB (CZ97,CY97)	R597	0700038M	CF. 1/16W 680-JB (CY97/95/93)
R527	0700027M	CF. 1/16W 100-JB	R598	0700042M	CF. 1/16W 1.2K-JB (CY97/95/93)
R529	0700054M	CF. 1/16W 10K-JB (CZ97,CY97)	R5E1	0700027M	CF. 1/16W 100-JB (CZ97,CY97)
R530	0700039M	CF. 1/16W 820-JB (CZ97,CY97)	R5E2	0700027M	CF. 1/16W 100-JB

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R5E3	0700027M	CF. 1/16W 100-JB (CZ97,CY97)	R706	0700054M	CF. 1/16W 10K-JB
R5E4	0700027M	CF. 1/16W 100-JB	R712	0110211S	MF. 39-JS (CZ97/95/93)
R5E6	0700027M	CF. 1/16W 100-JB (CZ97,CY97)	R712	0110217S	MF. 68-JS (CY97/95/93)
R5E8	0700027M	CF. 1/16W 100-JB	R716	0113729M	CF. 1/2W 150-JB (CY97/95/93)
R5E9	0700027M	CF. 1/16W 100-JB (CZ97,CY97)	R716	0113731M	CF. 1/2W 180-JB (CZ97/95/93)
R5F1	0700027M	CF. 1/16W 100-JB	R718	0100039M	CF. 1/8W 82-JB
R5F2	0700027M	CF. 1/16W 100-JB	R720	0188124M	CF. 1/4W 330-JB
R5F3	0700027M	CF. 1/16W 100-JB	R722	0700045M	CF. 1/16W 2.2K-JB
R5F4	0700041M	CF. 1/16W 1.0K-JB	R723	0100099M	CF. 1/8W 27K-JB
R5F5	0700041M	CF. 1/16W 1.0K-JB	R724	0700043M	CF. 1/16W 1.5K-JB
R5F6	0700041M	CF. 1/16W 1.0K-JB	R730	0700049M	CF. 1/16W 4.7K-JB
R5G1	0700027M	CF. 1/16W 100-JB	R731	0700052M	CF. 1/16W 6.8K-JB
R5G2	0700041M	CF. 1/16W 1.0K-JB	R732	0100077M	CF. 1/8W 3.3K-JB
R5P1	0700064M	CF. 1/16W 56K-JB	⚠ R736	0700032M	CF. 1/16W 220-JB
R5P2	0700061M	CF. 1/16W 33K-JB	R739	0700041M	CF. 1/16W 1.0K-JB
R5P3	0700041M	CF. 1/16W 1.0K-JB	R73A	0188108M	CF. 22-JB 1/2W
R5P4	0700027M	CF. 1/16W 100-JB	R73H	0113750M	CF. 1/2W 1K-JB
R5P5	0700045M	CF. 1/16W 2.2K-JB	R740	0110121S	MF. 100-JS
R602	0700062M	CF. 1/16W 39K-JB (CZ97/95/93)	R745	0100091M	CF. 1/8W 12K-JB
R602	0700063M	CF. 1/16W 47K-JB (CY97/95/93)	⚠ R746	0700041M	CF. 1/16W 1.0K-JB
R603	0700054M	CF. 1/16W 10K-JB	R74C	0113789M	CF. SRD1/2P-B 39K-J
R604	0700057M	CF. 1/16W 18K-JB	R74H	0113787M	CF. 1/2P-B 33K-J (CZ97/95/93)
R605	AW00098	TRIMMER RESISTOR	R74H	0113790M	CF. SRD1/2P-B 43K-J (CY97/95/93)
R606	0700059M	CF. 1/16W 27K-JB	R750	0700032M	CF. 1/16W 220-JB
R607	0700059M	CF. 1/16W 27K-JB (CZ97/95/93)	R751	0700034M	CF. 1/16W 330-JB
R607	0700061M	CF. 1/16W 33K-JB (CY97/95/93)	R752	0700045M	CF. 1/16W 2.2K-JB
R608	0700044M	CF. 1/16W 1.8K-JB (CY97/95/93)	R753	0700053M	CF. 1/16W 8.2K-JB
R608	0700047M	CF. 1/16W 3.3K-JB (CZ97/95/93)	R761	0700042M	CF. 1/16W 1.2K-JB
R609	0700058M	CF. 1/16W 22K-JB (CZ97/95/93)	R763	0110255S	MF. 2.7K-JS
R609	0700059M	CF. 1/16W 27K-JB (CY97/95/93)	R765	0100071M	CF. 1/8W 1.8K-JB
R610	0119841M	MF. 1W 0.82-JB	R766	0100101M	CF. 1/8W 33K-JB
R612	0113735M	CF. 1/2W 270-JB	R769	0700058M	CF. 1/16W 22K-JB
R613	0100125M	CF. 1/8W 330K-JB	R76G	0700064M	CF. 1/16W 56K-JB
R614	0700067M	CF. 1/16W 100K-JB	R76H	0700041M	CF. 1/16W 1.0K-JB
R615	0700057M	CF. 1/16W 18K-JB	R770	0700058M	CF. 1/16W 22K-JB
R616	0100131M	CF. 1/8W 560K-JB	R771	0700061M	CF. 1/16W 33K-JB
R617	0100129M	CF. 1/8W 470K-JB	R772	0100059M	CF. 1/8W 560-JB
R618	0700058M	CF. 1/16W 22K-JB	R773	0100089M	CF. 1/8W 10K-JB
R632	0114163M	CF. 1/4W 1.2K-JB (CY97/95/93)	R774	0700029M	CF. 1/16W 150-JB
R632	0188131M	CF. 1/4W 1K-JB (CZ97/95/93)	R775	0110223S	MF. 120-JS
R634	0110137S	MF. 470-JS (CZ97/95/93)	R781	0100073M	CF. 1/8W 2.2K-JB
R637	0110115S	MF. 56-JS	R782	0700054M	CF. 1/16W 10K-JB
R666	0188119M	CF. 150-J 1/2W	R783	0700053M	CF. 1/16W 8.2K-JB
R667	0700046M	CF. 1/16W 2.7K-JB	R786	0110241S	MF. 680-JS
R701	0700058M	CF. 1/16W 22K-JB	R787	0110211S	MF. 39-JS
R702	0700058M	CF. 1/16W 22K-JB	R790	0110255S	MF. 2.7K-JS
R703	0700027M	CF. 1/16W 100-JB	R794	0110255S	MF. 2.7K-JS
R704	0700054M	CF. 1/16W 10K-JB	R795	0188108M	CF. 22-JB 1/2W
R705	0113754M	CF. 1/2W 1.5K-JB	R798	0113760M	CF. 1/2W 2.7K-JB

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REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R932A	0700051M	CF. 1/16W 5.6K-JB	RS27	0700027M	CF. 1/16W 100-JB
RA01	0700051M	CF. 1/16W 5.6K-JB	RS50	0700045M	CF. 1/16W 2.2K-JB (CZ97,CY97)
RA02	0700051M	CF. 1/16W 5.6K-JB	RS51	0700045M	CF. 1/16W 2.2K-JB (CZ97,CY97)
RA03	0700051M	CF. 1/16W 5.6K-JB (CZ97,CY97)	RS52	0700045M	CF. 1/16W 2.2K-JB (CZ97,CY97)
RA04	0700051M	CF. 1/16W 5.6K-JB (CZ97,CY97)	RS53	0700045M	CF. 1/16W 2.2K-JB (CZ97,CY97)
RA05	0700051M	CF. 1/16W 5.6K-JB	RS54	0700063M	CF. 1/16W 47K-JB (CZ97,CY97)
RA06	0700051M	CF. 1/16W 5.6K-JB	RS55	0700063M	CF. 1/16W 47K-JB (CZ97,CY97)
RA07	0700051M	CF. 1/16W 5.6K-JB	RS56	0700051M	CF. 1/16W 5.6K-JB (CZ97,CY97)
RA08	0700051M	CF. 1/16W 5.6K-JB	RS57	0700043M	CF. 1/16W 1.5K-JB (CZ97,CY97)
RA11	0700027M	CF. 1/16W 100-JB	RS58	0700051M	CF. 1/16W 5.6K-JB (CZ97,CY97)
RA12	0700027M	CF. 1/16W 100-JB	RS59	0700051M	CF. 1/16W 5.6K-JB (CZ97,CY97)
RA50	0100065M	CF. 1/8W 1K-JB	RS60	0700043M	CF. 1/16W 1.5K-JB (CZ97,CY97)
RA51	0100113M	CF. 1/8W 100K-JB (CZ97,CY97)	RS61	0700051M	CF. 1/16W 5.6K-JB (CZ97,CY97)
RA52	0100065M	CF. 1/8W 1K-JB	RS62	0700045M	CF. 1/16W 2.2K-JB (CZ97,CY97)
RA53	0100113M	CF. 1/8W 100K-JB (CZ97,CY97)	RS63	0700054M	CF. 1/16W 10K-JB (CZ97,CY97)
RA64	0100123M	CF. 1/8W 270K-JB	RS64	0700045M	CF. 1/16W 2.2K-JB (CZ97,CY97)
RA65	0100123M	CF. 1/8W 270K-JB	RS65	0700054M	CF. 1/16W 10K-JB (CZ97,CY97)
RA66	0100123M	CF. 1/8W 270K-JB	RS66	0700067M	CF. 1/16W 100K-JB (CZ97,CY97)
RA67	0100123M	CF. 1/8W 270K-JB	RS67	0700037M	CF. 1/16W 560-JB (CZ97,CY97)
RC01	0700027M	CF. 1/16W 100-JB (CZ97,CY97,CZ95,CY95)	RS68	0700067M	CF. 1/16W 100K-JB (CZ97,CY97)
RC02	0700027M	CF. 1/16W 100-JB	RS69	0700054M	CF. 1/16W 10K-JB (CZ97,CY97)
RC04	0700027M	CF. 1/16W 100-JB	RS70	0700067M	CF. 1/16W 100K-JB (CZ97,CY97)
RC05	0700032M	CF. 1/16W 220-JB	RS71	0700037M	CF. 1/16W 560-JB (CZ97,CY97)
RC06	0700035M	CF. 1/16W 390-JB	RS72	0700054M	CF. 1/16W 10K-JB (CZ97,CY97)
RC07	0700039M	CF. 1/16W 820-JB	RS73	0700067M	CF. 1/16W 100K-JB (CZ97,CY97)
RC11	0700041M	CF. 1/16W 1.0K-JB	RS74	0700032M	CF. 1/16W 220-JB (CZ97,CY97)
RC12	0700053M	CF. 1/16W 8.2K-JB	RS75	0700032M	CF. 1/16W 220-JB (CZ97,CY97)
RC13	0700027M	CF. 1/16W 100-JB	RS76	0700049M	CF. 1/16W 4.7K-JB (CZ97,CY97)
RC14	0700027M	CF. 1/16W 100-JB	RS77	0700049M	CF. 1/16W 4.7K-JB (CZ97,CY97)
RC15	0700039M	CF. 1/16W 820-JB	RY01	0700027M	CF. 1/16W 100-JB
RC16	0100038M	CF. 1/8W 75-JB	RY02	0700027M	CF. 1/16W 100-JB (CZ97,CY97)
RC18	0700057M	CF. 1/16W 18K-JB	RY05	0700027M	CF. 1/16W 100-JB
RC30	0100038M	CF. 1/8W 75-JB (CZ97,CY97,CZ95,CY95)	RY06	0700027M	CF. 1/16W 100-JB
RS01	0100121M	CF. 1/8W 220K-JB	RY07	0700027M	CF. 1/16W 100-JB
RS02	0700041M	CF. 1/16W 1.0K-JB	RY08	0700041M	CF. 1/16W 1.0K-JB
RS03	0100133M	CF. 1/8W 680K-JB	RY09	0700041M	CF. 1/16W 1.0K-JB
RS04	0100123M	CF. 1/8W 270K-JB	RY10	0700041M	CF. 1/16W 1.0K-JB
RS05	0700027M	CF. 1/16W 100-JB	RY11	0700041M	CF. 1/16W 1.0K-JB
RS06	0700027M	CF. 1/16W 100-JB	RY12	0700027M	CF. 1/16W 100-JB
RS07	0187076M	CF. 1/16W 3.0K-JB	RY13	0700027M	CF. 1/16W 100-JB (CZ97,CY97)
RS08	0187082M	CF. 1/16W 5.1K-JB	RY14	0700027M	CF. 1/16W 100-JB
RS09	0187094M	CF. 1/16W 16K-JB	RY15	0700027M	CF. 1/16W 100-JB
RS10	0700037M	CF. 1/16W 560-JB	RY16	0700041M	CF. 1/16W 1.0K-JB (CZ97,CY97)
RS11	0100127M	CF. 1/8W 390K-JB	RY18	0100123M	CF. 1/8W 270K-JB (CZ97,CY97)
RS12	AT03391S	MF. 39 OHM 2W	RY19	0700055M	CF. 1/16W 12K-JB (CZ97,CY97)
RS13	0700054M	CF. 1/16W 10K-JB (CZ97,CY97)	RY20	0700027M	CF. 1/16W 100-JB
RS21	0700054M	CF. 1/16W 10K-JB	RY21	0100061M	CF. 1/8W 680-JB
RS25	0700027M	CF. 1/16W 100-JB	RY31	0100038M	CF. 1/8W 75-JB
RS26	0700051M	CF. 1/16W 5.6K-JB	RY32	0100038M	CF. 1/8W 75-JB

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SYMBOL NO.	PART NO.	PART DESCRIPTION
RY33	0700063M	CF. 1/16W 47K-JB
RY34	0700058M	CF. 1/16W 22K-JB
RY35	0100038M	CF. 1/8W 75-JB
RY43	0700041M	CF. 1/16W 1.0K-JB
RY45	0700039M	CF. 1/16W 820-JB
RY46	0700027M	CF. 1/16W 100-JB (CZ97,CY97,CZ95,CY95)
RY48	0100038M	CF. 1/8W 75-JB (CZ97,CY97,CZ95,CY95)
RY49	0700039M	CF. 1/16W 820-JB
RY50	0700027M	CF. 1/16W 100-JB
RY52	0700027M	CF. 1/16W 100-JB
RY53	0700039M	CF. 1/16W 820-JB
RY54	0700027M	CF. 1/16W 100-JB
RY55	0700039M	CF. 1/16W 820-JB
RY56	0700027M	CF. 1/16W 100-JB
RY57	0700036M	CF. 1/16W 470-JB
RY58	0700037M	CF. 1/16W 560-JB
RY59	0700061M	CF. 1/16W 33K-JB
RY60	0700027M	CF. 1/16W 100-JB
RY61	0700041M	CF. 1/16W 1.0K-JB
RY64	0100047M	CF. 1/8W 180-JB
RY69	0100049M	CF. 1/8W 220-JB
RY71	0700063M	CF. 1/16W 47K-JB
RY72	0100063M	CF. 1/8W 820-JB (CZ97,CY97,CZ95,CY95)
RY73	0700027M	CF. 1/16W 100-JB (CZ97,CY97,CZ95,CY95)
RY74	0700059M	CF. 1/16W 27K-JB
RY75	0100057M	CF. 1/8W 470-JB
RY76	0700064M	CF. 1/16W 56K-JB
RY85	0100038M	CF. 1/8W 75-JB (CZ97,CY97)
RY86	0100038M	CF. 1/8W 75-JB (CZ97,CY97)
RY86	0100113M	CF. 1/8W 100K-JB (CZ95,CY95,CZ93,CY93)
RY87	0100038M	CF. 1/8W 75-JB (CZ97,CY97)
RY87	0100113M	CF. 1/8W 100K-JB (CZ95,CY95,CZ93,CY93)
RY90	0700041M	CF. 1/16W 1.0K-JB (CZ97,CY97,CZ95,CY95)
RY91	0700063M	CF. 1/16W 47K-JB (CZ97,CY97,CZ95,CY95)
RY92	0700058M	CF. 1/16W 22K-JB (CZ97,CY97,CZ95,CY95)
RY93	0700041M	CF. 1/16W 1.0K-JB (CZ97,CY97,CZ95,CY95)
RY94	0700027M	CF. 1/16W 100-JB (CZ97,CY97,CZ95,CY95)
RY95	0700027M	CF. 1/16W 100-JB (CZ97,CY97)
RY96	0700027M	CF. 1/16W 100-JB (CZ97,CY97)
RY97	0100117M	CF. 1/8W 150K-JB (CZ97,CY97)
RY98	0700035M	CF. 1/16W 390-JB (CZ97,CY97)
RYH1	0700055M	CF. 1/16W 12K-JB (CZ97,CY97)
RYH2	0700059M	CF. 1/16W 27K-JB (CZ97,CY97)
RYH3	0700059M	CF. 1/16W 27K-JB (CZ97,CY97)
		SUB P.W.B. RESISTORS
R3F2	0700063M	CF. 1/16W 47K-JB (CZ97)
R3F3	0100055M	CF. 1/8W 390-JB (CZ97)
R3F4	0700059M	CF. 1/16W 27K-JB (CZ97)
R3F5	0700038M	CF. 1/16W 680-JB (CZ97)
R3F6	0100041M	CF. 1/8W 100-JB (CZ97)
R644	0700041M	CF. 1/16W 1.0K-JB
R645	0700041M	CF. 1/16W 1.0K-JB
R646	0700041M	CF. 1/16W 1.0K-JB
R647	0700044M	CF. 1/16W 1.8K-JB
R648	0188124M	CF. 1/4W 330-JB
R649	0100056M	CF. 1/8W 430-JB
R651	0700065M	CF. 1/16W 68K-JB (CZ97/95/93)
R652	0700057M	CF. 1/16W 18K-JB (CZ97/95/93)
R653	0700055M	CF. 1/16W 12K-JB (CY97/95/93)
R653	0700059M	CF. 1/16W 27K-JB (CZ97/95/93)
R654	0700056M	CF. 1/16W 15K-JB (CZ97/95/93)
R654	0700058M	CF. 1/16W 22K-JB (CY97/95/93)
R655	0700059M	CF. 1/16W 27K-JB (CZ97/95/93)
R655	0700062M	CF. 1/16W 39K-JB (CY97/95/93)
R656	0700062M	CF. 1/16W 39K-JB (CZ97/95/93)
R656	0700063M	CF. 1/16W 47K-JB (CY97/95/93)
R657	0700061M	CF. 1/16W 33K-JB (CY97/95/93)
R657	0700066M	CF. 1/16W 82K-JB (CZ97/95/93)
R658	0700055M	CF. 1/16W 12K-JB (CZ97/95/93)
R658	0700058M	CF. 1/16W 22K-JB (CY97/95/93)
R659	0100117M	CF. 1/8W 150K-JB
R664	0700058M	CF. 1/16W 22K-JB (CZ97/95/93)
R664	0700063M	CF. 1/16W 47K-JB (CY97/95/93)
R665	0700064M	CF. 1/16W 56K-JB
R669	0700067M	CF. 1/16W 100K-JB
R670	0700046M	CF. 1/16W 2.7K-JB
R671	0700065M	CF. 1/16W 68K-JB (CY97/95/93)
R672	0700064M	CF. 1/16W 56K-JB
R673	0100133M	CF. 1/8W 680K-JB
R674	0700034M	CF. 1/16W 330-JB
R743	0700056M	CF. 1/16W 15K-JB
R750	0100073M	CF. 1/8W 2.2K-JB (CY97/95/93)
R751	0700065M	CF. 1/16W 68K-JB
R752	0700058M	CF. 1/16W 22K-JB
R754	0100075M	CF. 1/8W 2.7K-JB
R755	AW00105	TRIMMER RESISTOR (CZ97/95/93)
R755	AW00107	TRIMMER RESISTOR (CY97/95/93)
R756	0700057M	CF. 1/16W 18K-JB
R757	0700064M	CF. 1/16W 56K-JB (CY97/95/93)
R757	0700065M	CF. 1/16W 68K-JB (CZ97/95/93)
R758	0700051M	CF. 1/16W 5.6K-JB
R759	0700054M	CF. 1/16W 10K-JB
R760	0700066M	CF. 1/16W 82K-JB
R767	0700044M	CF. 1/16W 1.8K-JB
R777	0161361	CF. 100K
R778	0700038M	CF. 1/16W 680-JB

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R779	0700027M	CF. 1/16W 100-JB	R940	0700049M	CF. 1/16W 4.7K-JB
R780	0700051M	CF. 1/16W 5.6K-JB	R941	0700051M	CF. 1/16W 5.6K-JB
R801	0100053M	CF. 1/8W 330-JB	R945	0700041M	CF. 1/16W 1.0K-JB
R802	0110257S	MF. 3.3K-JS	R946	0100091M	CF. 1/8W 12K-JB
R803	0110257S	MF. 3.3K-JS	R947	0700027M	CF. 1/16W 100-JB
R804	0110257S	MF. 3.3K-JS	R948	0119688M	MF. 1W 0.22-JB
R851	0110257S	MF. 3.3K-JS	R949	0700043M	CF. 1/16W 1.5K-JB
R852	0110257S	MF. 3.3K-JS	R94A	0113793M	CF. SRD1/2P-B 56K-J
R853	0110257S	MF. 3.3K-JS	R952	0119688M	MF. 1W 0.22-JB
R854	0113750M	CF. 1/2W 1K-JB	R953	0700054M	CF. 1/16W 10K-JB
R855	0113750M	CF. 1/2W 1K-JB	R954	0700043M	CF. 1/16W 1.5K-JB
R856	0113750M	CF. 1/2W 1K-JB	R955	0188124M	CF. 1/4W 330-JB
R857	0100053M	CF. 1/8W 330-JB	R956	0188108M	CF. 22-JB 1/2W
R858	0100053M	CF. 1/8W 330-JB	R957	0700045M	CF. 1/16W 2.2K-JB
R861	0187044M	CF. 1/16W 130-JB	R958	0113744M	CF. SRD1/2P-B 560-J
R869	0187044M	CF. 1/16W 130-JB	R959	0700054M	CF. 1/16W 10K-JB
R871	0187044M	CF. 1/16W 130-JB	R960	0700056M	CF. 1/16W 15K-JB
R889	0188117M	CF. 1/2W 100-JB	R961	0700049M	CF. 1/16W 4.7K-JB
R890	0188117M	CF. 1/2W 100-JB	R962	0700046M	CF. 1/16W 2.7K-JB
R891	0188117M	CF. 1/2W 100-JB	R963	0700054M	CF. 1/16W 10K-JB
R893	0100073M	CF. 1/8W 2.2K-JB	R965	0113750M	CF. 1/2W 1K-JB
R896	0700034M	CF. 1/16W 330-JB	R967	0700054M	CF. 1/16W 10K-JB
R897	0700034M	CF. 1/16W 330-JB	R972	0100041M	CF. 1/8W 100-JB
R898	0700034M	CF. 1/16W 330-JB	R973	0119688M	MF. 1W 0.22-JB
R899	0700027M	CF. 1/16W 100-JB	R976	0700054M	CF. 1/16W 10K-JB
R901	0144151	WW. 33-J	R977	0700027M	CF. 1/16W 100-JB
R902	CJ00091	TH. ZPK66BL3R0E	R978	0700027M	CF. 1/16W 100-JB
R903A	0113796M	CF. SRD1/2P-B 75K-J	R979	0700041M	CF. 1/16W 1.0K-JB
R903B	0113796M	CF. SRD1/2P-B 75K-J	R980	0700054M	CF. 1/16W 10K-JB
R904	0147060	W W. 2W 33-K	R981	0700054M	CF. 1/16W 10K-JB
R905A	0113774M	CF. SRD1/2P-B 10K-J	R982	0700045M	CF. 1/16W 2.2K-JB
R905B	0113774M	CF. SRD1/2P-B 10K-J	R983	0700051M	CF. 1/16W 5.6K-JB
R906	0147809	WW. 1.2-J 15W	R984	0100071M	CF. 1/8W 1.8K-JB
R907	0700054M	CF. 1/16W 10K-JB	R985	0113770M	CF. SRD1/2P-B 6.8K-J
R908	0100107M	CF. 1/8W 56K-JB	R986	0113774M	CF. SRD1/2P-B 10K-J
R909	0100065M	CF. 1/8W 1K-JB	R987	0700046M	CF. 1/16W 2.7K-JB
R910	0188108M	CF. 22-JB 1/2W	R988	0700054M	CF. 1/16W 10K-JB
R912	0700045M	CF. 1/16W 2.2K-JB	R994	0700041M	CF. 1/16W 1.0K-JB
R916A	0119688M	MF. 1W 0.22-JB	R995	0100065M	CF. 1/8W 1K-JB
R916B	0119688M	MF. 1W 0.22-JB	R9A1	0100083M	CF. 1/8W 5.6K-JB
R916C	0119688M	MF. 1W 0.22-JB	R9A2	0100075M	CF. 1/8W 2.7K-JB
R925	0188133M	CF. 1/2W 1.5K-JB	R9A3	0100073M	CF. 1/8W 2.2K-JB
R926	0100075M	CF. 1/8W 2.7K-JB	R9A5	0700054M	CF. 1/16W 10K-JB
R927	0188137M	CF. 1/2W 3.3K-JB	RA71	0100041M	CF. 1/8W 100-JB (CZ97)
R928	0188128M	CF. 680-J 1/2W	RA72	0700041M	CF. 1/16W 1.0K-JB (CZ97)
R930	0100113M	CF. 1/8W 100K-JB	RA73	0700041M	CF. 1/16W 1.0K-JB (CZ97)
R931	0119691M	MF. 1W 0.33JB	RA74	0700064M	CF. 1/16W 56K-JB (CZ97)
R932	0700043M	CF. 1/16W 1.5K-JB	RA75	0700045M	CF. 1/16W 2.2K-JB (CZ97)
R933	0700046M	CF. 1/16W 2.7K-JB	RA76	0100123M	CF. 1/8W 270K-JB (CZ97)

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
RA77	0700047M	CF. 1/16W 3.3K-JB (CZ97)	RV38	0700049M	CF. 1/16W 4.7K-JB (CZ97,CY97)
RA78	0700064M	CF. 1/16W 56K-JB (CZ97)	RV39	0700051M	CF. 1/16W 5.6K-JB (CZ97,CY97)
RA79	0100123M	CF. 1/8W 270K-JB (CZ97)	RV40	0700061M	CF. 1/16W 33K-JB (CZ97,CY97)
RA80	0700041M	CF. 1/16W 1.0K-JB (CZ97)	RV41	0700036M	CF. 1/16W 470-JB (CZ97,CY97)
RA81	0700041M	CF. 1/16W 1.0K-JB (CZ97)	RV42	0700043M	CF. 1/16W 1.5K-JB (CZ97,CY97)
RA82	0100041M	CF. 1/8W 100-JB (CZ97)	RV44	0700043M	CF. 1/16W 1.5K-JB (CZ97,CY97)
RM04	0100065M	CF. 1/8W 1K-JB (CZ97/95/93)	RV45	0700067M	CF. 1/16W 100K-JB (CZ97,CY97)
RM06	0700041M	CF. 1/16W 1.0K-JB (CZ97/95/93)	RV46	0700058M	CF. 1/16W 22K-JB (CZ97,CY97)
RM07	0700043M	CF. 1/16W 1.5K-JB (CZ97/95/93)	RV47	0700039M	CF. 1/16W 820-JB (CZ97,CY97)
RM08	0700046M	CF. 1/16W 2.7K-JB (CZ97/95/93)	RV50	0700027M	CF. 1/16W 100-JB (CZ97,CY97)
RM09	0700049M	CF. 1/16W 4.7K-JB (CZ97/95/93)	RV51	0700039M	CF. 1/16W 820-JB (CZ97)
RM15	0700054M	CF. 1/16W 10K-JB (CZ97/95/93)	RV51	0700041M	CF. 1/16W 1.0K-JB (CY97)
RMF1	0700051M	CF. 1/16W 5.6K-JB (CZ97/95/93)	RV53	0700027M	CF. 1/16W 100-JB (CZ97,CY97)
RMF2	0100053M	CF. 1/8W 330-JB (CZ97/95/93)	RV55	0100041M	CF. 1/8W 100-JB (CZ97,CY97)
RMF3	0100056M	CF. 1/8W 430-JB (CZ97/95/93)	RY70	0187038M	CF. 1/16W 75-J (CZ97)
RMF4	0100093M	CF. 1/8W 15K-JB (CZ97/95/93)			
RV01	0700067M	CF. 1/16W 100K-JB (CZ97,CY97)			**MAIN P.W.B. SWITCHES**
RV02	0700059M	CF. 1/16W 27K-JB (CZ97,CY97)			
RV04	0700035M	CF. 1/16W 390-JB (CZ97,CY97)	S001	2632851	5KEY TACT SWITCH (CY97/95/93)
RV06	0700034M	CF. 1/16W 330-JB (CZ97,CY97)	S002	2634621	SWITCH BLOCK VR (CY97/95/93)
RV07	0700057M	CF. 1/16W 18K-JB (CZ97,CY97)	S003	2634621	SWITCH BLOCK VR (CY97/95/93)
RV08	0700067M	CF. 1/16W 100K-JB (CZ97,CY97)			
RV09	0700033M	CF. 1/16W 270-JB (CZ97,CY97)			**SUB P.W.B. SWITCHES/RELAYS**
RV10	0700033M	CF. 1/16W 270-JB (CZ97,CY97)			
RV11	0700042M	CF. 1/16W 1.2K-JB (CZ97,CY97)	S901	FJ00071	AC POWER RELAY ALK3213
RV12	0700045M	CF. 1/16W 2.2K-JB (CZ97,CY97)	S902	FJ00071	AC POWER RELAY ALK3213
RV13	0700058M	CF. 1/16W 22K-JB (CZ97,CY97)	SM01	2634621	SWITCH BLOCK VR (CZ97/95/93)
RV16	0700036M	CF. 1/16W 470-JB (CZ97,CY97)	SM02	2632851	5KEY TACT SWITCH (CZ97/95/93)
RV17	0700046M	CF. 1/16W 2.7K-JB (CZ97,CY97)	SM03	2634621	SWITCH BLOCK VR (CZ97/95/93)
RV19	0700024M	CF. 1/16W 56-J (CZ97)	⚠ SMF1	2620971	SLIDE SWITH (CZ97/95/93)
RV19	0700027M	CF. 1/16W 100-JB (CY97)	⚠ SMF2	2620802	SLIDE SW (CZ97/95/93)
RV20	0700041M	CF. 1/16W 1.0K-JB (CZ97,CY97)			
RV21	0113701M	CF. SRD1/2P-B 10-J (CZ97,CY97)			**MAIN P.W.B. TRANSFORMERS**
RV22	0100039M	CF. 1/8W 82-JB (CZ97,CY97)			
RV23	0100039M	CF. 1/8W 82-JB (CZ97,CY97)	⚠ T701	BW00661	H-DRIVE TRANS.
RV24	0700043M	CF. 1/16W 1.5K-JB (CZ97,CY97)	⚠ T702	2437094	FBT-C87LUI
RV25	0100069M	CF. 1/8W 1.5K-JB (CZ97,CY97)			
RV26	0188124M	CF. 1/4W 330-JB (CZ97,CY97)			**SUB P.W.B. TRANSFORMERS**
RV27	0188155M	CF. 68K-JB (CZ97,CY97)			
RV28	0188155M	CF. 68K-JB (CZ97,CY97)	⚠ T901	BT01361	PT-EE54F15U-(M9)
RV29	0100053M	CF. 1/8W 330-JB (CZ97/95/93)			
RV30	0700055M	CF. 1/16W 12K-JB (CZ97,CY97)			**MAIN P.W.B. MODULES**
RV31	0113716M	CF. SRD1/2P-B 43-J (CZ97,CY97)			
RV32	0113716M	CF. SRD1/2P-B 43-J (CZ97,CY97)	U001	CZ00641	GP1U281Q (CY97/95/93)
RV33	0113686M	CF. 1/2W 2.7-J (CZ97,CY97)	U101	HC00325	TUNER UNIT FOR CTR ENG26509GY
RV34	0113686M	CF. 1/2W 2.7-J (CZ97,CY97)	U102	HC00323	F-E-ENG26509G-R (CZ97,CY97,CZ95,CY95)
RV35	0110237S	MF. 2W 470-J (CZ97,CY97)			
RV36	0110135S	MF. 390-JS (CZ97,CY97)			
RV37	0110132S	MF. 300-JS (CZ97,CY97)			

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SYMBOL NO.	PART NO.	PART DESCRIPTION
		MAIN P.W.B. CRISTALS/OSC.
X001	2163971	CERAMIC FILTER 4MHZ
X501	2791501	CRYSTAL HC-49/U
X502	2168771	X'TAL CSB503F30
		MAIN P.W.B. MISCELLANEOS PARTS
N403	3446862	VERTICAL HEAT SINK M1LXU
N403A	4520881	M3*8 SCREW WITH WASHER
N403B	8821234	NUT-3
N601	3446862	VERTICAL HEAT SINK M1LXU
N601A	4520881	M3*8 SCREW WITH WASHER
N601B	8821234	NUT-3
N701	8821114	NUT,3
N701A	4243445	G51 INSULATION WASHER PL-11T
N701B	8711412	SCREW-3X12 PAN HEAD
N702	3445542	H.HEAT SINK HY09 A11DOP-H22
N702A	4514061	SCREW FLANGED 3*12
N702B	8821234	NUT-3
N702C	8813124	SPRING WASHER-3
N702D	4284311	2000 EARTH PIN
N702E	4159411	SCREW 3*8 KNURLED TAPPING SWRM
N752	3445563	HEAT SINK A3LXU
N752A	4520881	M3*8 SCREW WITH WASHER
N910	4107502	PWB METAL R (A1) TC-30
N912	4107512	A1LXU1 PWB METAL L TC-30
P65A	ED00562	CP-TAC-L05X-A1
P66A	ED00561	CP-TAC-L04X-A1
PCXA	2675593	15P PLUG PIN
PF1A	2902266	PLUG PIN SUB MINI 7P (CZ97/95/93)
PF2A	2902263	PLUG PIN SUB MINI 4P (CZ97/95/93)
PFV	2902265	PLUG PIN SUB MINI 6P (CZ97)
PG1	2902261	PLUGPIN SUB MINI 2P (CZ97/95/93)
PIPA	ED00576	CP-TAC-L20X-A1
PM	2665272	4P PLUG PIN WITH BASE
PMF1	2959053	5P POST PIN 4P TYPE PH
PMH2	2902264	PLUG PIN SUB MINI 5P
PMH3	2902267	PLUG PIN SUB MINI 8P
PMS1	2661754	5P PLUG PIN WITH BASE
PSL	2902261	PLUGPIN SUB MINI 2P
PSR	2902262	PLUG PIN SUB MINI 3P
Z403	9414017	SILICONE COMPOUND(G-746)
Z601	9414017	SILICONE COMPOUND(G-746)
Z703	9413926	SILICON RUBBER
Z706	9414017	SILICONE COMPOUND(G-746)
Z752	9414017	SILICONE COMPOUND(G-746)

SYMBOL NO.	PART NO.	PART DESCRIPTION
		SUB P.W.B. MISCELLANEOS PARTS
ND901	3446852	HEAT SINK D TYPE BLACK
ND934	3446473	HEATSINK H30 P10
ND934A	4520883	3*12 SCREW WITH WASHER
ND936	3446473	HEATSINK H30 P10
ND936A	4520883	3*12 SCREW WITH WASHER
NE901	3772201	AC CORD HOLDER NYLON
NI901	MD03121	POW.HEAT SINK M7LXU
NI901A	4520883	3*12 SCREW WITH WASHER
NI901B	4159411	SCREW 3*8 KNURLED TAPPING SWRM
NI901C	4284311	2000 EARTH PIN
NQ851	4348493	CPT HEAT SINK A2LXU AL
NQ854	4348493	CPT HEAT SINK A2LXU AL
NQ857	4348493	CPT HEAT SINK A2LXU AL
NQ913	3445563	HEAT SINK A3LXU
NQ913A	4520881	M3*8 SCREW WITH WASHER
NQ914	3445563	HEAT SINK A3LXU
NQ914A	4520881	M3*8 SCREW WITH WASHER
NQV09	3446473	HEATSINK H30 P10 (CZ97,CY97)
NQV09A	4520883	3*12 SCREW WITH WASHER (CZ97,CY97)
NQV10	3446473	HEATSINK H30 P10 (CZ97,CY97)
NQV10A	4520883	3*12 SCREW WITH WASHER (CZ97,CY97)
NX901	2784342	CONDENSER COVER
P2	2661751	2P PLUG PIN WITH BASE
P31	2661751	2P PLUG PIN WITH BASE
P55B	ED00502	CP-TAC-L05P-A1
P56B	ED00501	CP-TAC-L04P-A1
PAC1	2723091	PLUG CP-02BP5R0V-SD-53415
PAC2	2723091	PLUG CP-02BP5R0V-SD-53415
PE901	ED01851	PLUG 5289-2A
PF1B	2902266	PLUG PIN SUB MINI 7P (CZ97/95/93)
PF2B	2902263	PLUG PIN SUB MINI 4P (CZ97/95/93)
PFVB	2902265	PLUG PIN SUB MINI 6P (CZ97)
PG2	2902241	PLUG PIN SUB MINI 2P (CZ97/95/93)
PG3	2661942	3P PLUG PIN WITH L TYPE (CZ97/95/93)
PMF	2959053	5P POST PIN 4P TYPE PH
PNH2	2902264	PLUG PIN SUB MINI 5P
PNH3	2902267	PLUG PIN SUB MINI 8P
PNS1	2661754	5P PLUG PIN WITH BASE
PVM1	2902266	PLUG PIN SUB MINI 7P (CZ97,CY97)
PVMC	2902261	PLUGPIN SUB MINI 2P (CZ97,CY97)
PW	2661753	4P PLUG PIN WITH BASE
PY1	2902265	PLUG PIN SUB MINI 6P
PY2	2902263	PLUG PIN SUB MINI 4P
⚠ X901	AJ00322	ENC271D-14A
Z901	9414017	SILICONE COMPOUND(G-746)

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SYMBOL NO.	PART NO.	PART DESCRIPTION
Z913	9414017	SILICONE COMPOUND(G-746)
Z914	9414017	SILICONE COMPOUND(G-746)
ZB1	9414017	SILICONE COMPOUND(G-746)
ZB2	9414017	SILICONE COMPOUND(G-746)
ZX901	9553958	ADHESIVE TAPE (PERMACEL P212 19W)
Z913	9414017	SILICONE COMPOUND(G-746)
Z914	9414017	SILICONE COMPOUND(G-746)
ZB1	9414017	SILICONE COMPOUND(G-746)
ZB2	9414017	SILICONE COMPOUND(G-746)
ZX901	9553958	ADHESIVE TAPE (PERMACEL P212 19W)
		MAIN CHASSIS MISCELLANEOUS PARTS
#01	NT00511	A4LXU POWER PWB HOLDER
#021	3701202	PWB HOLDER G7-A PA (32")
#10	H311745	TERMINAL LABEL (36FX) (CZ95)
#100	4159423	SCR NO 3X12 FL/FLT
#106	NT00536	TERMINAL BOARD M9L36 (36")
#107	NT00535	TERMINAL BOARD M9L32 (32")
#160	3739671	BS CORD HOLDER NYLON6
#20	H311746	TERMINAL LABEL (32FX) (CZ95)
#202	4519503	3X12 B TAPPING SCREW SWCH15A
#210	4159427	3X10 SCREW WITH WASHER STEEL
#250	4519503	3X12 B TAPPING SCREW SWCH15A
#251	4520232	4X16 D SCREW SWCH16A (CZ97/97,CY97/95)
#251A	4520232	4X16 D SCREW SWCH16A (CZ93,CY93)
#30	H312161	TERMINAL LABEL (36CX) (CZ93)
#40	H312162	TERMINAL LABEL (32CX) (CY93)
#50	H312163	TERMINAL LABEL (36UX) (CZ97)
#60	H312164	TERMINAL LABEL (32UX) (CY97)
#950	4329271	WASHER (F) C2720R (CZ97/95,CY97/95)
#950A	4329271	WASHER (F) C2720R (CZ93,CY93)
#952	4522901	6 NUT (F) BSBM (CZ97/95,CY97/95)
#952A	4522901	6 NUT (F) BSBM (CZ93,CY93)
#970	NT00791	TUNER HOLDER A3LXU4
#980	4159423	SCR NO 3X12 FL/FLT
EFE1	2979174	PLUG WITH COAXIAL CABLE
EFE2	2979173	PLUG WITH COAXIAL CABLE (CZ97/95,CY97/95)
EG	2973682S	CONN.W/WIRE SEH 2J(L620) UL1007 (36")
EMF	2908698	4J CONNE. L=470
N102	3763751	SK BINDER
N103	3763751	SK BINDER
PANT	2687791	F-US ADAPTOR (CZ93,CY93)
UANT	HP00341	ANT SW (CZ97/95,CY97/95)
UCX	JP01952	3-LINE PWB ASY (CZ97,CY97)
UCX	JP03531	PSA-M9 2LINE PWB ASY (CZ95/93,CY95/93)
UPIP	JP01941	CZ77 PINP PWB.AS'Y(M7LXU)

SYMBOL NO.	PART NO.	PART DESCRIPTION
		FINAL / CABINET ASSEMBLY PARTS 36UX59B/32UX59B
#100	QD04567	36UX59B FRAME SUBASS'Y (CZ97)
#101	QD06532	32UX59B FRAME SUBASS'Y (CY97)
#110	QD03491	FRAME 36V(CZ97)
#111	QD00265	FRAME 32CX10B/11B (CY97)
#115	3760031	SMALL PIECE (S-2) FOR CABINET PS
#120	PH02512	DOOR 36UX72B (CZ97)
#121	PH03841	DOOR 32CX12B (CY97)
#125	3875771	LATCH 4T02 NYLON
#130	PC01191	BUTTON 35UX80B (CZ97)
#131	PC00345	BUTTONS (CY97)
#135	4519511	4X12 B TAPPING SCREW STEEL
#140	PH02542	R/C LENS 36UX72B (CZ97)
#141	H310885	R/C LENS (CY97)
#145	4519511	4X12 B TAPPING SCREW STEEL
#150	PH02532	INDOOR PLATE 36UX72B (CZ97)
#151	PH00911	INDOOR PLATE 31UX5B (CY97)
#160	3487427	HITACHI BADGE 55
#170	H311174	CPT BRACKET (R) (CY97)
#171	H311173	CPT BRACKET (L) (CY97)
#175	4520771	HEXAGON HEAD TAPPING SCREW 4*18 (CY97)
#200	4286581	PVC WASHER 2.0T (CY97)
#205	4518378	6X35 TAPPING SCREW WITH WASHER.STEEL
#210	3857506	LENS SPACER T0.3 PVC (CY97)
#220	4519511	4X12 B TAPPING SCREW STEEL
#250	4515482	SCREW-4X16 WITH WASHER STEEL (CZ97)
#251	4515482	SCREW-4X16 WITH WASHER STEEL (CZ97)
#255	4519512	4X16 B TAPPING SCREW STEEL (CY97)
#256	4519512	4X16 B TAPPING SCREW STEEL (CY97)
#260	4519512	4X16 B TAPPING SCREW STEEL (CZ97)
#261	4519512	4X16 B TAPPING SCREW STEEL (CZ97)
#300	QD01571	BACK COVER 35TX80B (CZ97)
#301	3164049	BACKCOVER 32V (CY97)
#305	4519512	4X16 B TAPPING SCREW STEEL (CZ97)
#306	4519512	4X16 B TAPPING SCREW STEEL (CZ97)
#310	3727972	POWER CORD HANGER
#325	8441615	HIMERON SHEET (CZ97)
#330	4520771	HEXAGON HEAD TAPPING SCREW 4*18 (CY97)
#900	H920182	VELCRO (CY97)
#905	H390047	HIMERON SHEET (CY97)
#910	8441429	HIMERON SHEET(I) HIMERON (CY97)
#915	8441428	HIMERON SHEET(H) HIMERON (CY97)
#920	8440444	SP HIMERON C29-BV20 (CY97)
EAC	2976985	CONNECTOR CO-02C-C7R5-102LOCK

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SYMBOL NO.	PART NO.	PART DESCRIPTION
EF1A	H210592	CO-07C-C2R507-B-300 (CZ97)
EF2A	H210612	CO-04C-C2R507-B-300 (CZ97)
EFV	H210825	CO-06C-C2R507-B-430 (CZ97)
EMH2	H210798	CO-05C-CR2507-B-470
EMH3	2973867S	8J CONNECTOR L=1000 (CZ97)
EMH3	H210887	C0-08C-C2R507-B-750 (CY97)
EMH3A	H210891	CO-08C-C2R507-B-1000 (CZ97)
EMS1	EF04013	C0-05C-C5R0-621
N101	3705232	ANODE CLAMPER 94V0 (1010N)
N103	3763751	SK BINDER
N104	3737102	PURSE LOCK 15
N105	3731082	PURSE LOCK 11.5 (CZ97)
N105	3737102	PURSE LOCK 15 (CY97)
N106	3737102	PURSE LOCK 15
N107	3731082	PURSE LOCK 11.5 (CZ97)
N107	3737102	PURSE LOCK 15 (CY97)
N108	3737102	PURSE LOCK 15
N109	3737102	PURSE LOCK 15
N110	3737102	PURSE LOCK 15
N111	3737102	PURSE LOCK 15 (CZ97)
N112	3731082	PURSE LOCK 11.5 (CZ97)
N113	3731082	PURSE LOCK 11.5
N114	3731082	PURSE LOCK 11.5
N114A	3737102	PURSE LOCK 15 (CY97)
N115	3737102	PURSE LOCK 15
N116	4690171	CAUTION LABEL C (F)
N117	3737102	PURSE LOCK 15
N150	8441428	HIMERON SHEET(H) HIMERON (CZ97)
		FINAL / CABINET ASSEMBLY PARTS 32FX49B/32CX39B
#100	QD06533	32FX49B FRAME SUBASS'Y (CY95)
#101	QD06534	32CX39B F/FRAME SUB ASSY PS (CY93)
#111	QD00265	FRAME 32CX10B/11B
#115	3760031	SMALL PIECE (S-2) FOR CABINET PS
#121	PH03841	DOOR 32CX12B
#131	PC00345	BUTTONS
#136	4519511	4X12 B TAPPING SCREW STEEL
#141	H310885	R/C LENS
#146	4519511	4X12 B TAPPING SCREW STEEL
#160	3487427	HITACHI BADGE 55
#170	H311174	CPT BRACKET (R)
#171	H311173	CPT BRACKET (L)
#175	4520771	HEXAGON HEAD TAPPING SCREW 4*18
#201	4286581	PVC WASHER 2.0T
#206	4518378	6X35 TAPPING SCREW WITH WASHER .STEEL

SYMBOL NO.	PART NO.	PART DESCRIPTION
#210	3857506	LENS SPACER T0.3 PVC
#221	4519511	4X12 B TAPPING SCREW STEEL
#255	4519512	4X16 B TAPPING SCREW STEEL
#256	4519512	4X16 B TAPPING SCREW STEEL
#301	3164049	BACKCOVER 32V
#306	4520771	HEXAGON HEAD TAPPING SCREW 4*18
#310	3727972	POWER CORD HANGER
#316	4520771	HEXAGON HEAD TAPPING SCREW 4*18
#900	H920182	VELCRO
#905	H390047	HIMERON SHEET
#910	8441429	HIMERON SHEET(I) HIMERON
#915	8441428	HIMERON SHEET(H) HIMERON
#920	8440444	SP HIMERON C29-BV20
EAC	2976985	CONNECTOR CO-02C-C7R5-102LOCK
EMH2	H210798	CO-05C-CR2507-B-470
EMH3	H210887	C0-08C-C2R507-B-750
EMS1	EF04013	C0-05C-C5R0-621
N101	3705232	ANODE CLAMPER 94V0 (1010N)
N103	3763751	SK BINDER
N104	3737102	PURSE LOCK 15
N106	3737102	PURSE LOCK 15
N107	3737102	PURSE LOCK 15
N108	3731082	PURSE LOCK 11.5
N109	3728273	PURSE LOCK (8)
N110	3737102	PURSE LOCK 15
N113	3728273	PURSE LOCK (8)
N114	3728273	PURSE LOCK (8)
N114A	3737102	PURSE LOCK 15
N115	3737102	PURSE LOCK 15
N116	4690171	CAUTION LABEL C (F)
N118	3728273	PURSE LOCK (8)
		FINAL / CABINET ASSEMBLY PARTS 36FX49B/36CX39B
#100	QD04568	36FX49B FRAME SUBASS'Y (CZ95)
#101	QD04569	36CX39B FRAME SUBASS'Y (CZ93)
#110	QD03491	FRAME 36V
#115	3760031	SMALL PIECE (S-2) FOR CABINET PS
#120	PH02512	DOOR 36UX72B
#130	PC01191	BUTTON 35UX80B
#135	4519512	4X16 B TAPPING SCREW STEEL
#140	PH02542	R/C LENS 36UX72B
#145	4519512	4X16 B TAPPING SCREW STEEL
#160	3487427	HITACHI BADGE 55
#205	4518378	6X35 TAPPING SCREW WITH WASHER STEEL
#220	4519512	4X16 B TAPPING SCREW STEEL

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REPLACEMENT PARTS LIST

PRODUCT SERVICE NOTE: Components marked w ith a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully, the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver trough improper servicing.

SYMBOL NO.	PART NO.	PART DESCRIPTION
#250	4515482	SCREW-4X16 TAPPING WITH WASHER STEEL
#251	4515482	SCREW-4X16 TAPPING WITH WASHER STEEL
#260	4519512	4X16 B TAPPING SCREW STEEL
#261	4519512	4X16 B TAPPING SCREW STEEL
#300	QD01571	BACK COVER 35TX80B
#305	4519512	4X16 B TAPPING SCREW STEEL
#306	4519512	4X16 B TAPPING SCREW STEEL
#310	3727972	POWER CORD HANGER
#325	8441615	HIMERON SHEET
EAC	2976985	CONNECTOR CO-02C-C7R5-102LOCK
EF1A	H210592	CO-07C-C2R507-B-300
EF2A	H210612	CO-04C-C2R507-B-300
EFV	H210825	CO-06C-C2R507-B-430 (CZ93)
EMH2	H210798	CO-05C-CR2507-B-470
EMH3	H210891	CO-08C-C2R507-B-1000
EMS1	EF04013	C0-05C-C5R0-621
N101	3705232	ANODE CLAMPER 94V0 (1010N)
N103	3763751	SK BINDER
N104	3737102	PURSE LOCK 15
N105	3731082	PURSE LOCK 11.5
N106	3737102	PURSE LOCK 15
N107	3731082	PURSE LOCK 11.5
N108	3728273	PURSE LOCK (8)
N109	3737102	PURSE LOCK 15
N110	3731082	PURSE LOCK 11.5
N111	3737102	PURSE LOCK 15
N112	3731082	PURSE LOCK 11.5
N113	3731082	PURSE LOCK 11.5 (CZ95)
N114	3728273	PURSE LOCK (8)
N114A	3737102	PURSE LOCK 15
N115	3737102	PURSE LOCK 15
N116	4690171	CAUTION LABEL C (F)
N117	3737102	PURSE LOCK 15
N150	8441428	HIMERON SHEET(H) HIMERON
		OWNER'S ASSEMBLY PARTS
E203	FQ00021	BATTERY(R6P-AA)
E301	HL00238	RML CLU-4111UI (CZ97,CY97)
E301	HL00239	RCT CLU-4111U (CZ95/95,CY95,93)
N201	QR40341	36/32UX59B-511 INST.BOOK(ENG) (USA)
N201	QR40351	36/32UX59B-501 INST.BOOK(FRN) (CANADA)
N205	3611877	POLYETHLENE COVER (CZ97,CY97)
N205	3611879	POLYETHYLENE BAG (CZ95/93,CY95/93)

SYMBOL NO.	PART NO.	PART DESCRIPTION
		CPT ASSEMBLY PARTS " 32 INCHES "
⚠ E601	BY00821	DY-32V 110 SVC
E602	2994511	CRT EARTH WIRE
E603	2771461	EDGE MAGNET
E604	2773672	CF-MAGNET (CY95/93)
E604	2776541	VM MAGNET (C-C) (CY97)
EVM	2979222	2J CONNECTOR (L=120MM) (CY97)
L905	BZ01751	AL D-COIL 32V
N601	4615641	WEDGE
N606	3330941	EARTH SPRING
N607A	3763751	SK BINDER
N608	3763752	SK BINDER 200 NYLON 66
N610	2772981	FERRITE SHEET ASS'Y
N610A	2772981	FERRITE SHEET ASS'Y
N611	2772211	MAG. PIECE
N612	2956801	EARTH RING
⚠ V1	DE01371	A80LJF30X(W)
		SPEAKERS ASSEMBLY PARTS
JSL	2976647	2J EH CONNECTOR 701
JSR	2976656	3J EH CONNECTOR (32")
JSR	2976657	3I EH CONNECTOR 861 (36")
⚠ SP451	GK00262	SPEAKER 6X12D
⚠ SP452	GK00262	SPEAKER 6X12D
		PACKING ASSEMBLY PARTS "36 INCHES"
#10	H361095	99 CARTON BOX
#20	SP01792	TOP CUSHION 35V
#30	SP01803	35TX/UX BOTTOM CUSHION
#40	H370857	FOAM BLOCK
#50	H360762	LAMINATED POLY FOAM BAG
#96	56010009	36" PROTECTION PAD
		PACKING ASSEMBLY PARTS "32 INCHES"
#10	H361173	99 CARTON BOX
#20	H361021	TOP CUSHION 32V
#30	H361033	BOTTOM CUSHION 32V
#40	H360836	BOTTOM PAD
#50	H360761	POLY BAG FOAM LAMINATED

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NOTES:

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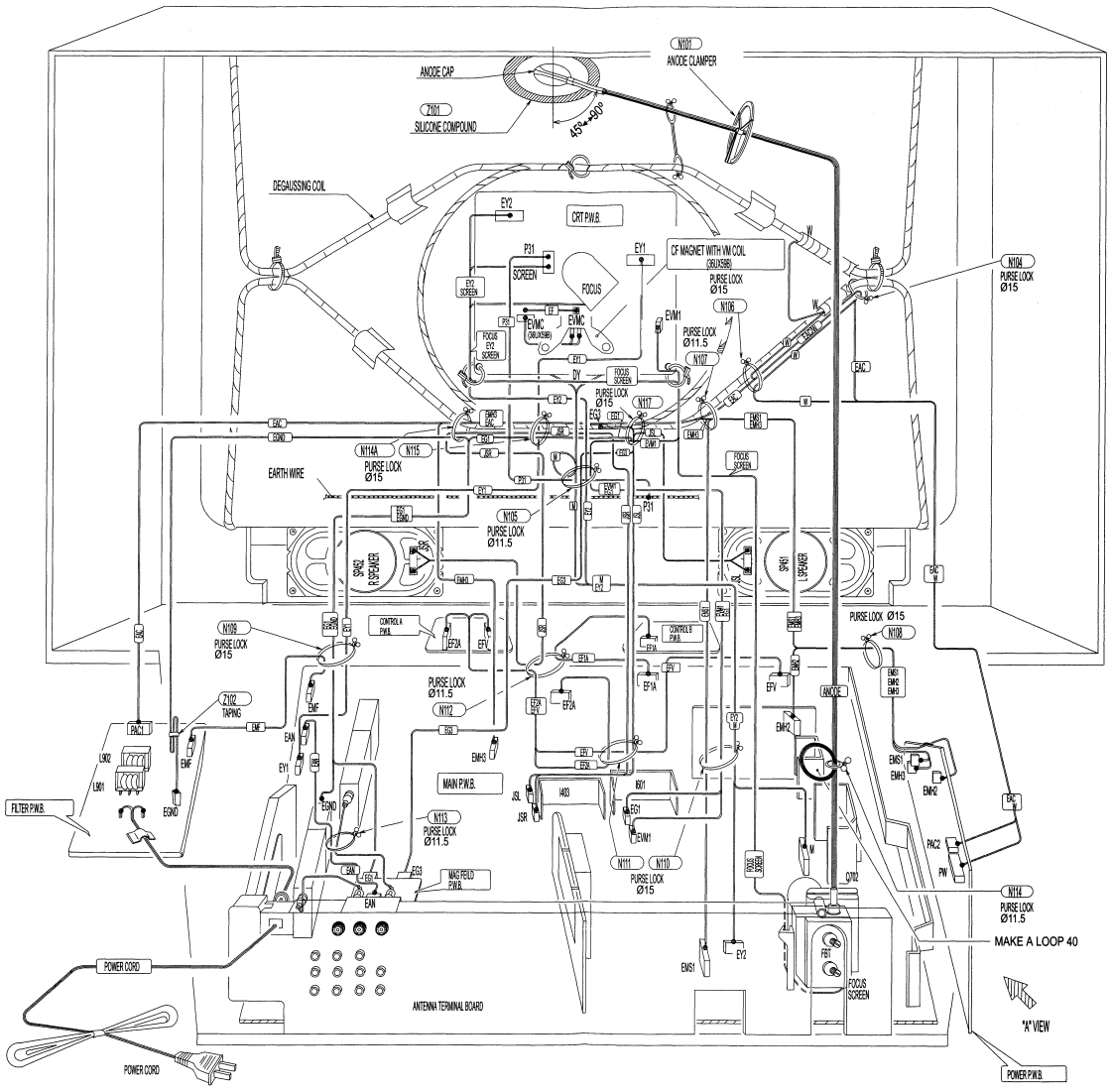
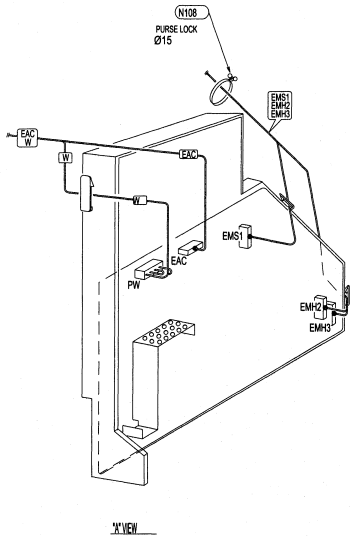
Wiring Drawing of 36UX59B/36FX49B Final Assembly





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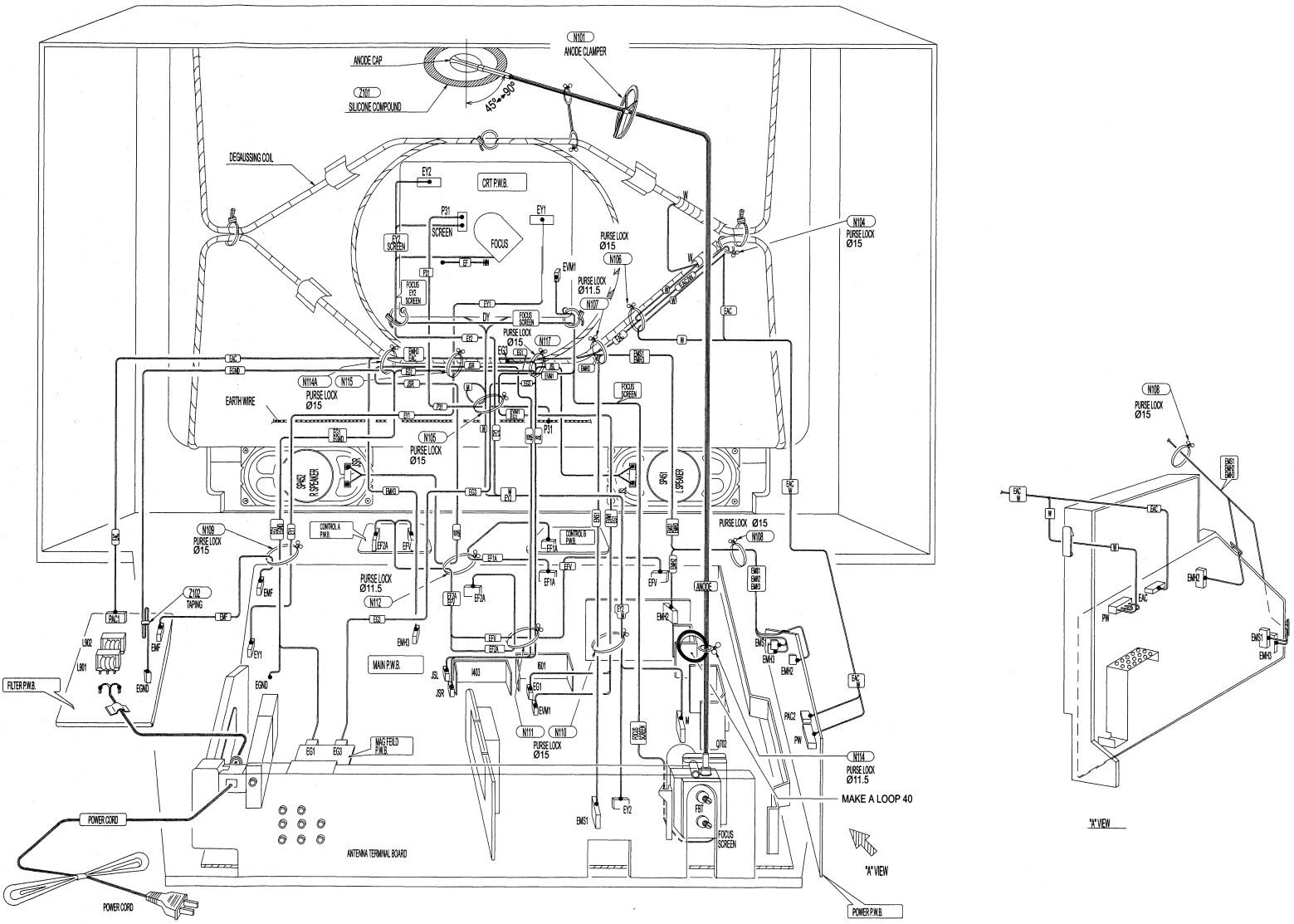
Wiring Drawing of 36CX39B Final Assembly



"A" VIEW

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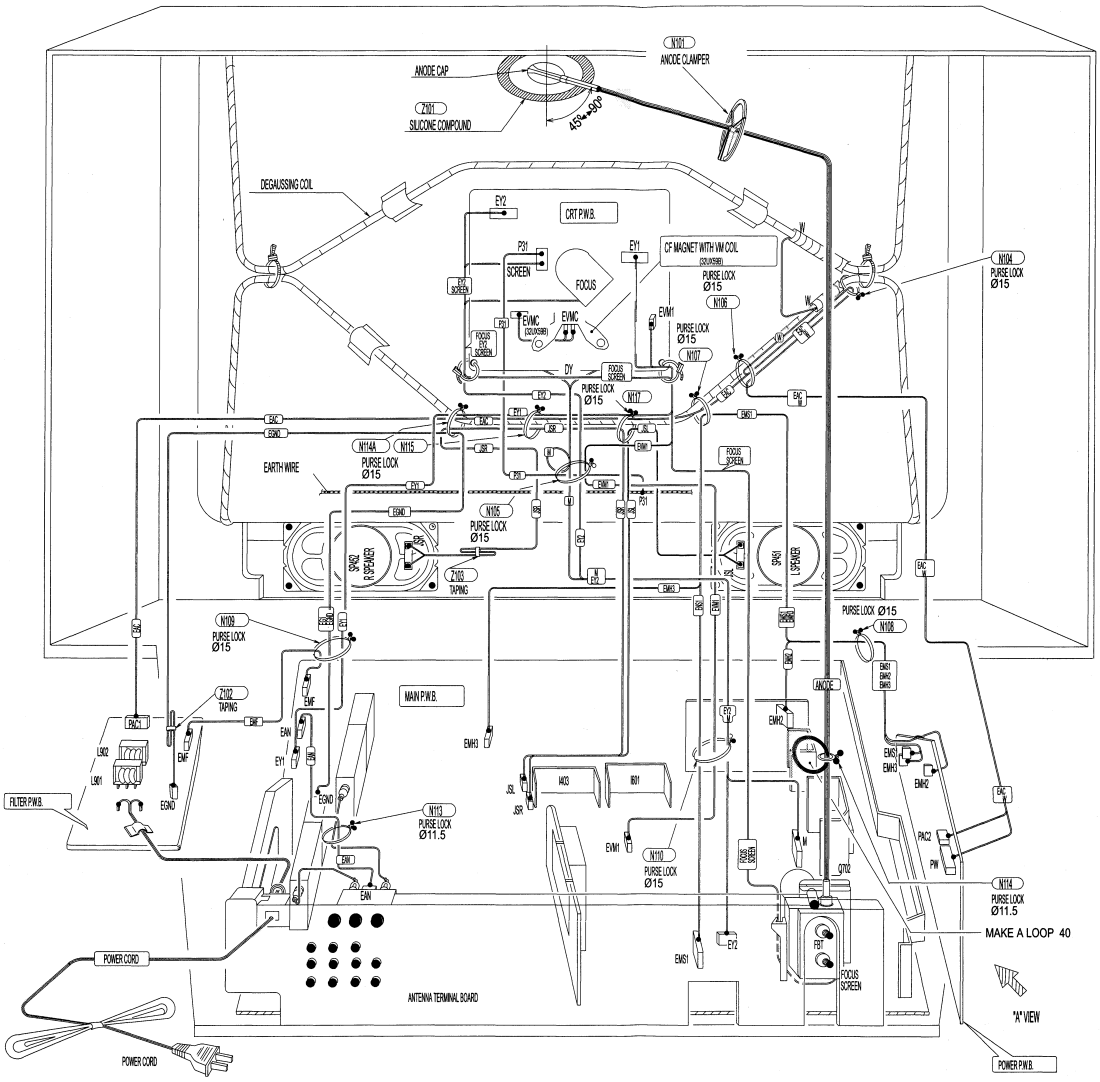
Wiring Drawing of 32UX59B/32FX49B Final Assembly



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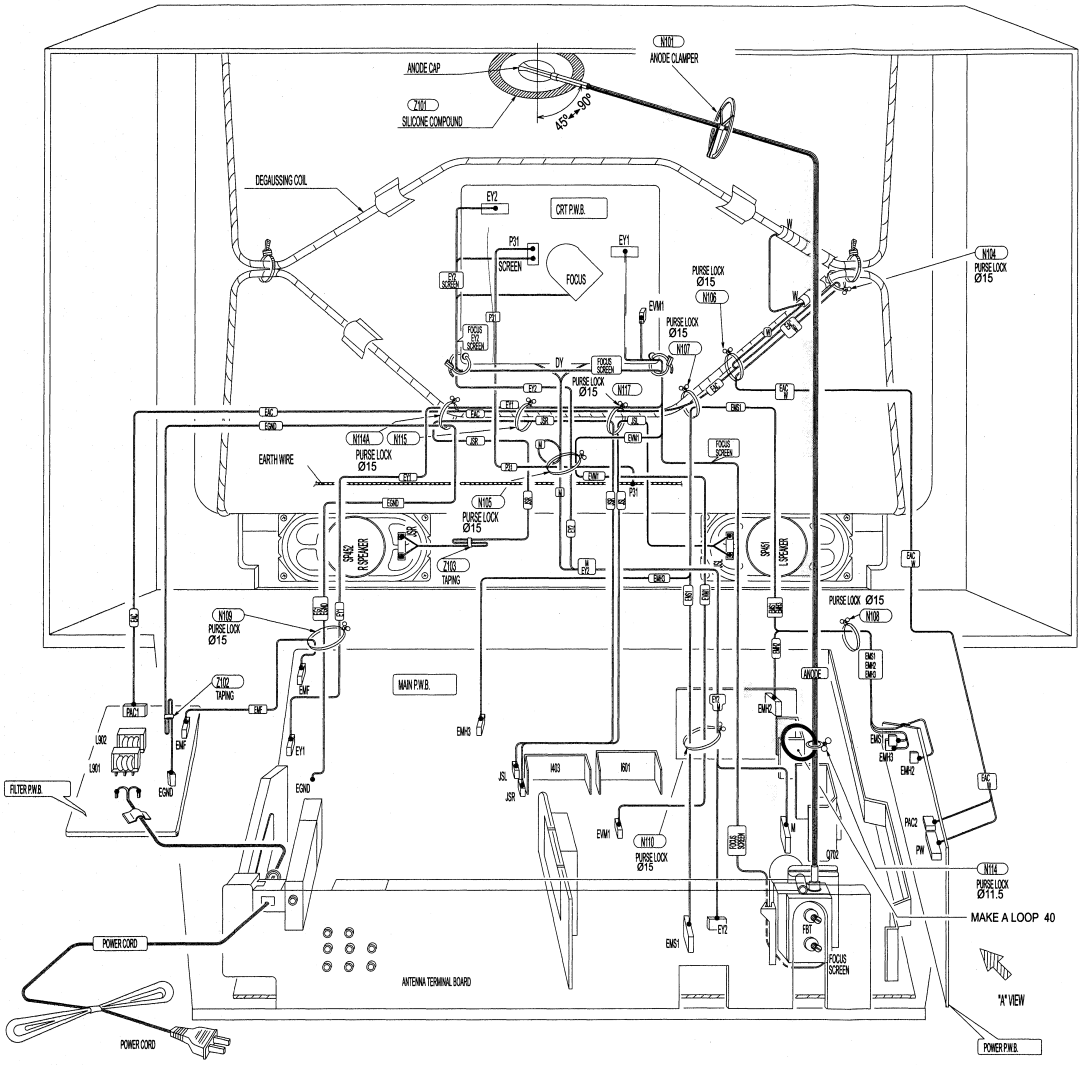
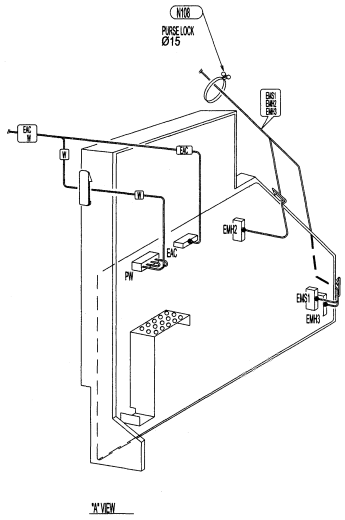
Wiring Drawing of 32CX39B Final Assembly





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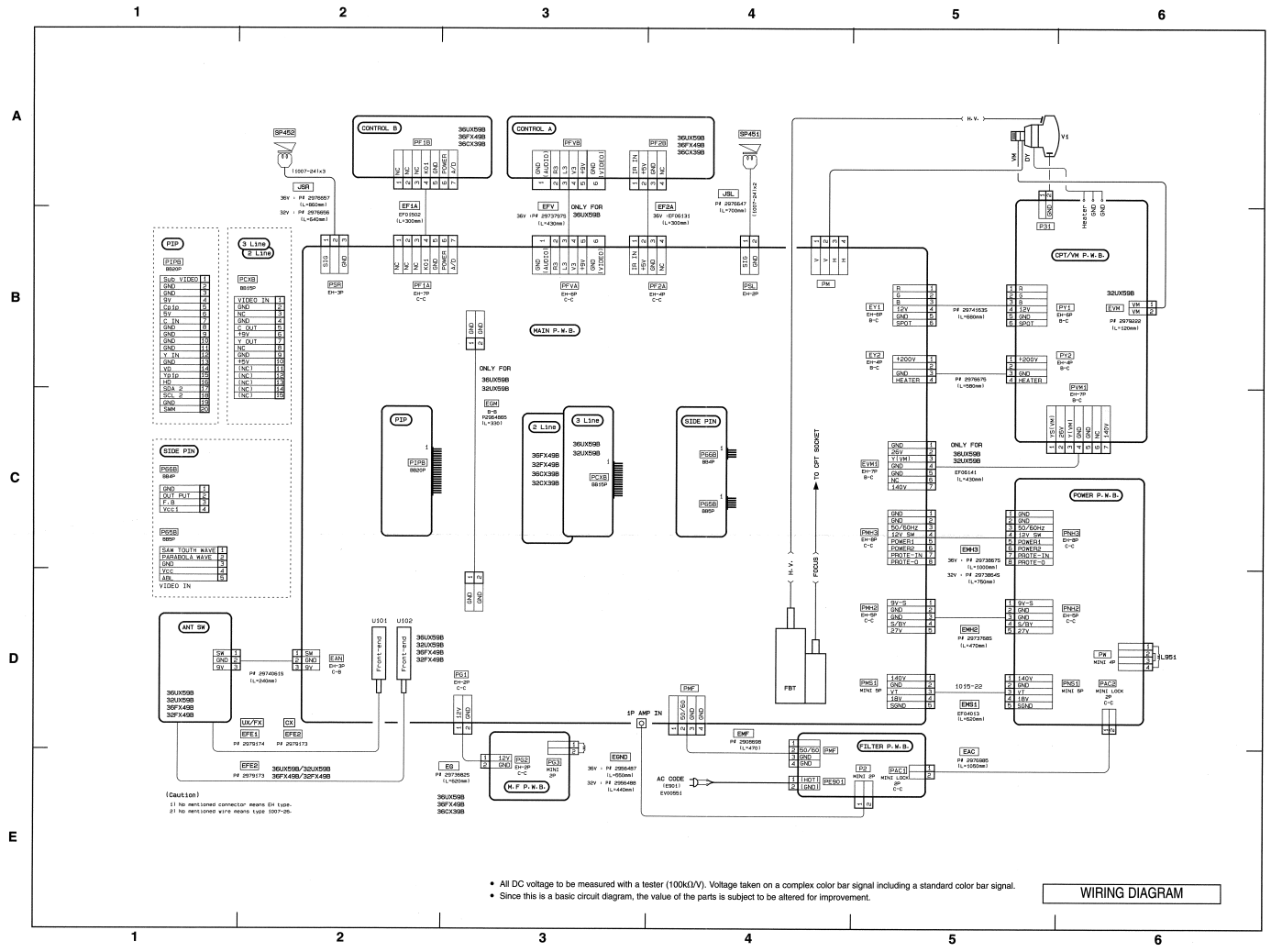
PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

WIRING DIAGRAM OF
36UX59B/CZ97, 32UX59B/CY97, 36FX49B/CZ95, 32FX49B/CY95, 36CX39B/CZ93, AND 32CX39B/CY93



- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

WIRING DIAGRAM

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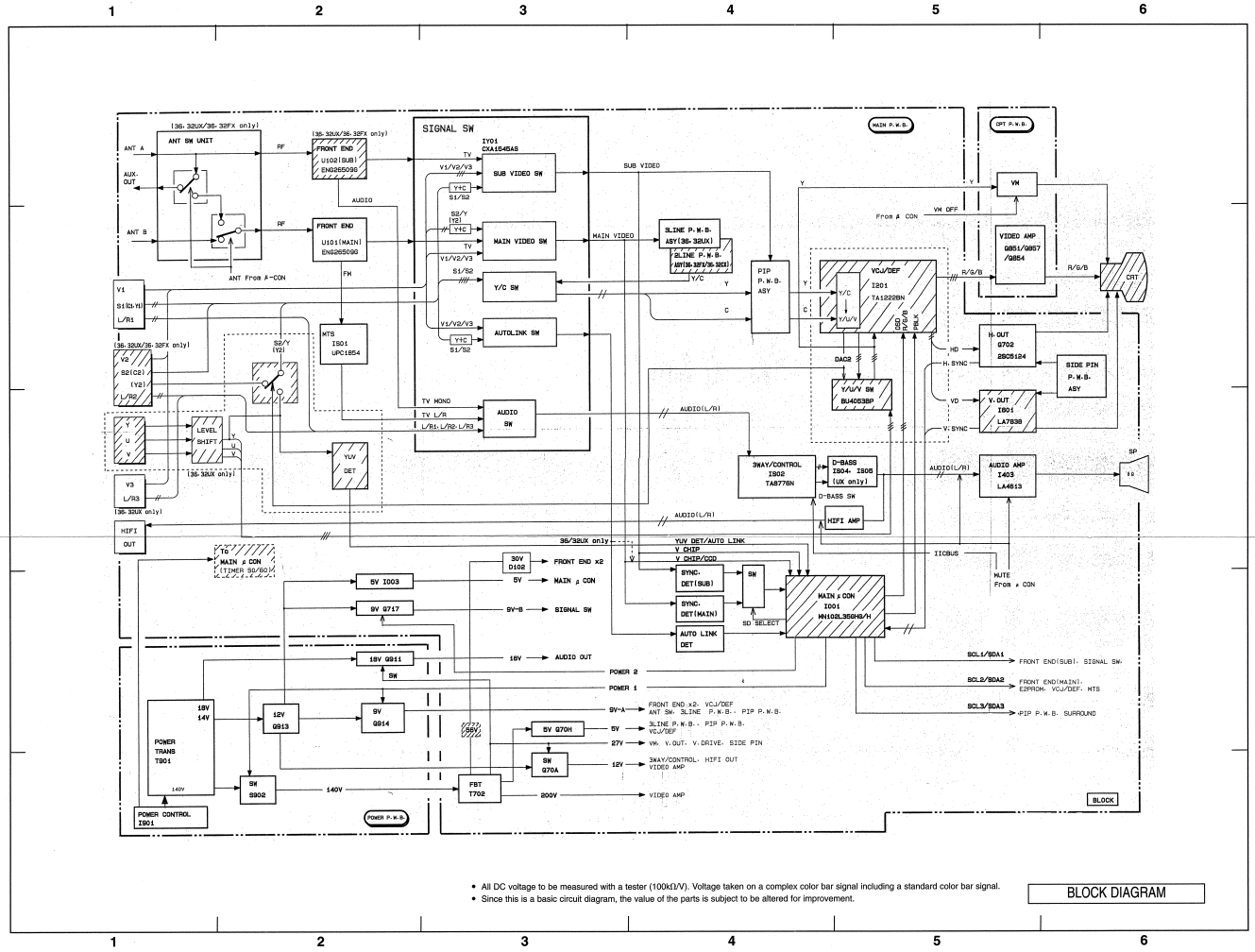
CIRCUIT SCHEMATIC BLOCK DIAGRAM OF M9LXU CHASSIS

PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.



- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

BLOCK DIAGRAM

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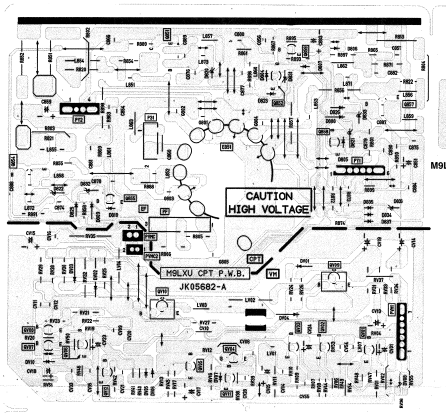
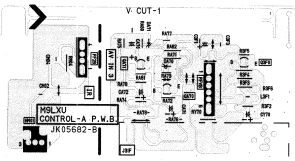
PRINTED WIRING BOARD (P.W.B.) FOIL PATTERN
M9LXU SUB AND POWER P.W.B.

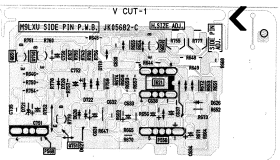
M9LXU CPT P.B.W.



M9LXU CONTROL-A P.W.B.

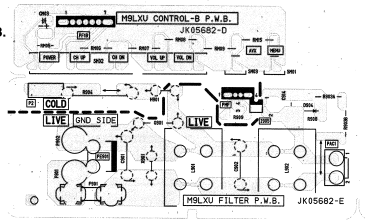


M9LXU SIDE PIN P.W.B.



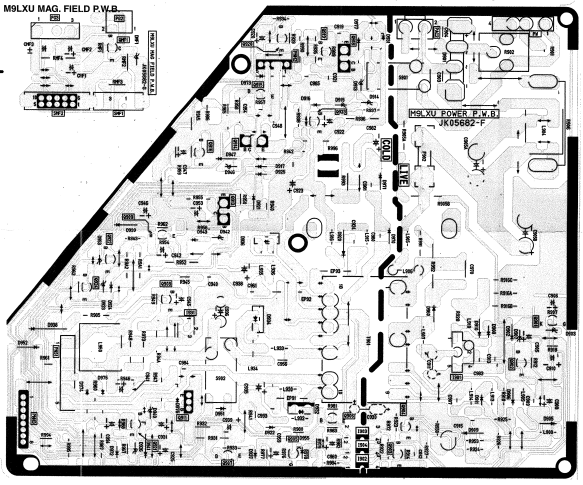
M9LXU MAG. FIELD P.W.B.

M9LXU CONTROL-B P.W.B.



M9LXU FILTER P.B.W.

M9LXU POWER P.B.W.



- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

M9LXU SUB AND POWER P.W.B.

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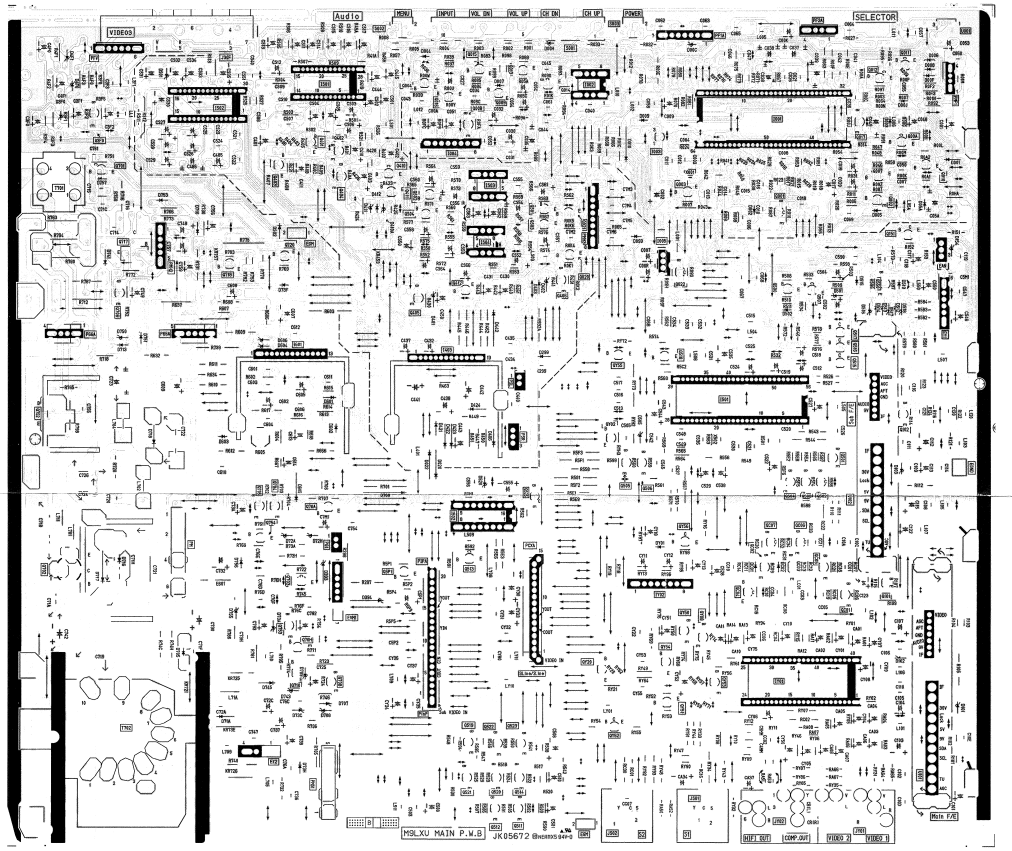
MAIN P.W.B.

PRINTED WIRING BOARD (P.W.B.) FOIL PATTERN
M9LXU MAIN P.W.B.

PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.



- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

M9LXU MAIN P.W.B.

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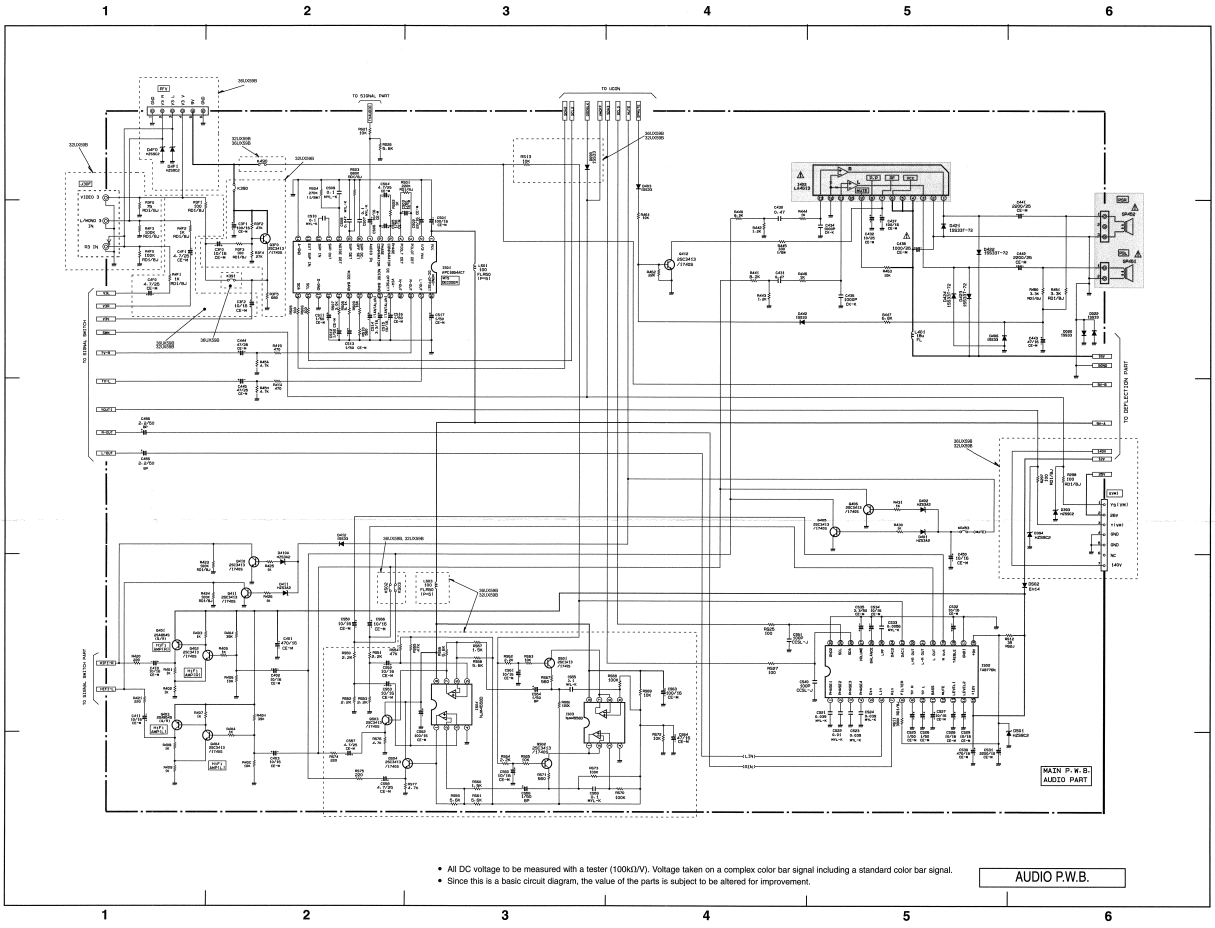
CIRCUIT SCHEMATIC DIAGRAM OF
36UX59B/CZ97, 32UX59B/CY97, 36FX49B/CZ95, 32FX49B/CY95, 36CX39B/CZ93, AND 32CX39B/CY93

CIRCUIT No.	Pin No.	DC Voltage
I403	1	9.4
	2	0
	3	9.6
	4	19.2
	5	0
	6	0
	7	9.6
	8	12.4
	9	2.3
	10	0
	11	1.4
	12	0
	13	1.4
CIRCUIT No.	Pin No.	DC Voltage
Q3P0	B	3.1
	C	3.3
	E	2.5
Q401	B	11.1
	C	11.7
	E	11.7
Q402	B	2.3
	C	11.1
	E	1.7
Q403	B	11.1
	C	2.6
	E	11.7
Q404	B	2.4
	C	11.1
	E	1.7
Q405	B	0
	C	0
	E	0
Q406	B	0
	C	0
	E	0
Q410	B	0
	C	0
	E	0
Q411	B	0
	C	0
	E	0
Q412	B	9.4
	C	0
	E	0.1
Q501	B	4.4
	C	4.4
	E	5.1
Q502	B	4.4
	C	4.4
	E	4.6
Q503	B	5.0
	C	0.6
	E	4.4
Q504	B	4.4
	C	5.0
	E	5.8

CIRCUIT No.	Pin No.	DC Voltage
IS01	1	8.0
	2	4.5
	3	4.4
	4	4.5
	5	4.4
	6	4.4
	7	4.4
	8	4.3
	9	4.4
	10	0.2
	11	5.1
	12	4.4
	13	4.4
	14	0
	15	4.4
	16	4.4
	17	0
	18	4.3
	19	4.5
	20	4.5
	21	1.2
	22	4.6
	23	5.1
	24	4.5
	25	4.5
	26	4.5
	27	4.5
	28	3.0
IS02	1	4.6
	2	4.6
	3	4.6
	4	4.6
	5	4.6
	6	4.6
	7	4.6
	8	1.8
	9	4.6
	10	4.5
	11	4.6
	12	0
	13	4.2
	14	0.3
	15	11.9
	16	8.3
	17	0
	18	4.6
	19	5.3
	20	5.0
	21	0.4
	22	5.3
	23	0.1
	24	0.1
	25	4.6
	26	6.0
	27	1.0
	28	4.2
	29	4.2
	30	0
IS03	1	4.5
	2	4.5
	3	4.4
	4	0
	5	4.5
	6	4.5
	7	0
	8	8
IS04	1	4.5
	2	4.5
	3	4.4
	4	0
	5	4.4
	6	4.4
	7	4.4
	8	9



- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

AUDIO P.W.B.

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CIRCUIT SCHEMATIC DIAGRAM OF
36UX59B/CZ97, 32UX59B/CY97, 36FX49B/CZ95, 32FX49B/CY95, 36CX39B/CZ93, AND 32CX39B/CY93

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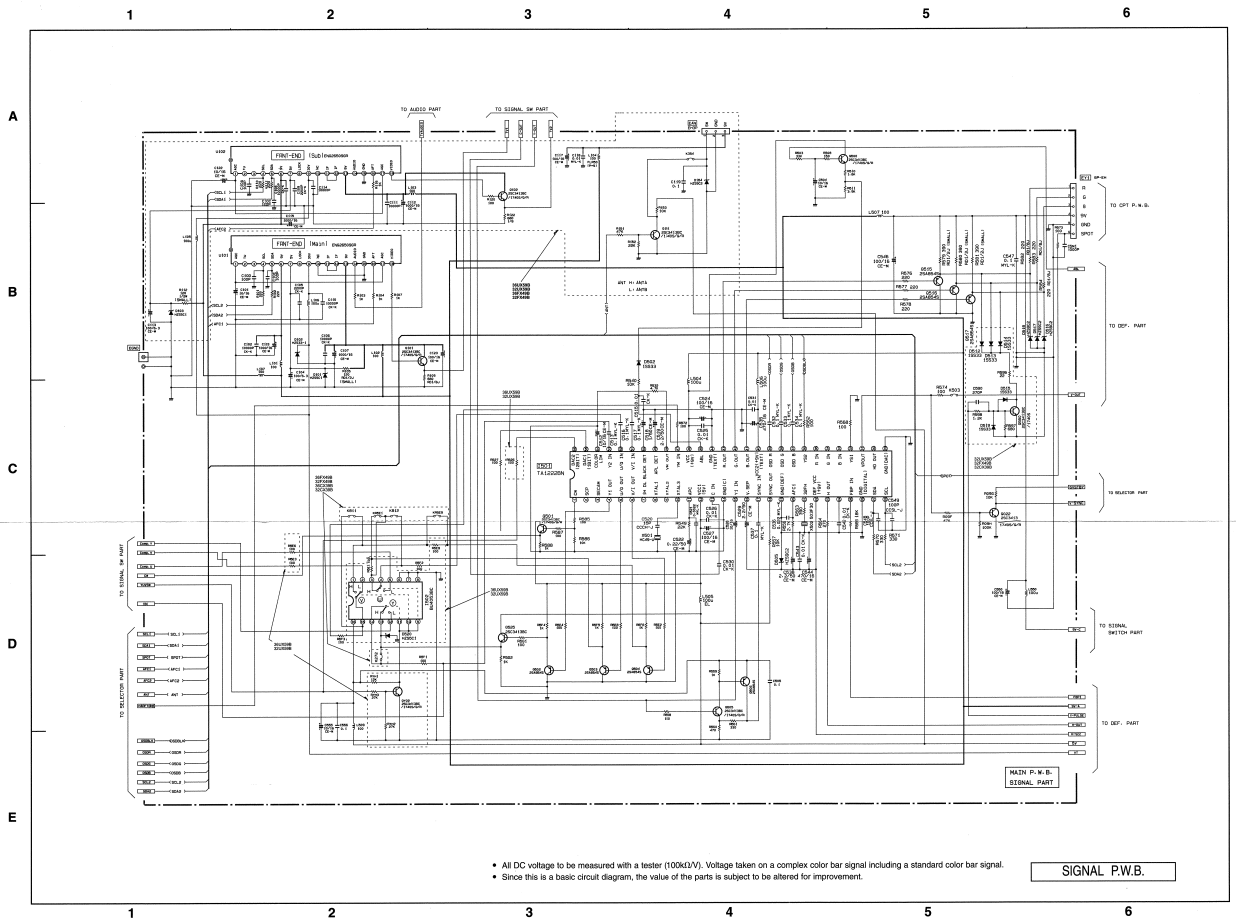

CIRCUIT No.	Pin No.	DC Voltage
I501	1	3.1
	2	1.2
	3	4.1
	4	0
	5	2.6
	6	2.6
	7	0
	8	4.1
	9	4.1
	10	4.2
	11	2.2
	12	3.3
	13	2.3
	14	0
	15	2.6
	16	6.5
	17	2.7
	18	4.7
	19	5
	20	7.7
	21	6.2
	22	6.5
	23	1.4
	24	4.5
	25	1.5
	26	0
	27	4.8
	28	4
	29	5
	30	6.1
	31	4.8
	32	5
	33	3.2
	34	3.2
	35	3.2
	36	5
	37	3.2
	38	3.2
	39	3.2
	40	6.5
	41	2.6
	42	2.7
	43	2.7
	44	0
	45	5.6
	46	6.5
	47	5
	48	5.4
	49	5.4
	50	5
	51	4.9
	52	0
	53	6.4
	54	6.5
	55	5.2
	56	5
I502	1	2.3
	2	4
	3	5.3
	4	2.3
	5	3.2
	6	0
	7	0
	8	0
	9	3.2
	10	3.2
	11	5.2
	12	2.3
	13	2
	14	5.2
	15	3.2
	16	5.2

CIRCUIT No.	Pin No.	DC Voltage
Q101	B	4.6
	C	5.4
	E	3.9
Q102	B	4.7
	C	8.6
	E	4.1
Q322	B	0.8
	C	5.1
	E	0
Q101	B	0.5
	C	0
	E	0
Q600	B	7.2
	C	8.9
	E	7.7
Q601	B	0
	C	0.4
	E	0
Q602	B	2.4
	C	2.0
	E	7.6
Q603	B	0
	C	0.3
	E	0.6
Q604	B	0
	C	3.2
	E	0
Q605	B	4.5
	C	4.5
	E	4.8
Q606	B	4.8
	C	0
	E	0
Q615	B	0.7
	C	0
	E	0.3
Q516	B	0
	C	0
	E	0.4
Q517	B	2.8
	C	0.3
	E	3.1
Q525	B	2.8
	C	5.2
	E	2
Q550	B	0.1
	C	4.8
	E	0
QY02	B	0
	C	0.2
	E	0

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

SIGNAL P.W.B.

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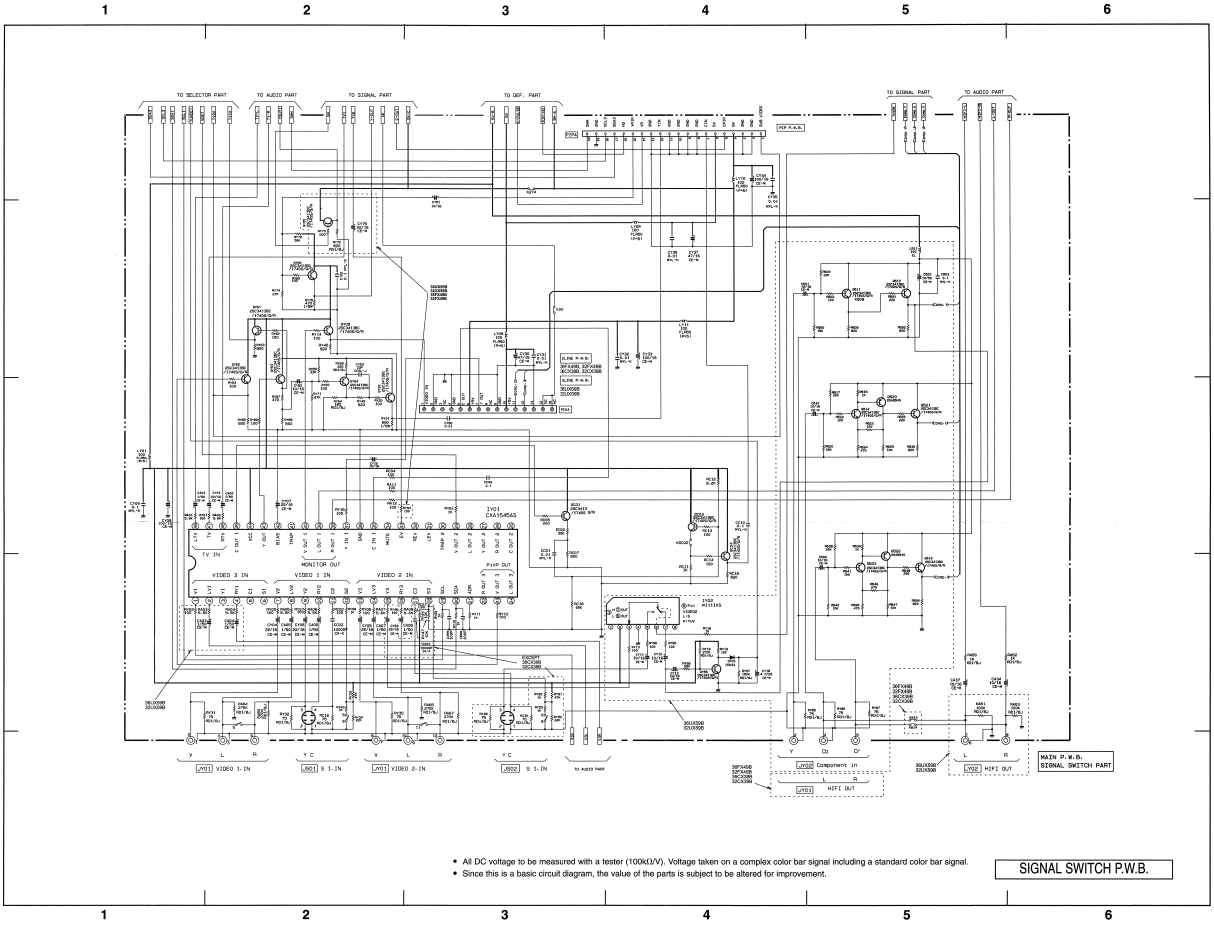
CIRCUIT SCHEMATIC DIAGRAM OF
36UX59B/CZ97, 32UX59B/CY97, 36FX49B/CZ95, 32FX49B/CY95, 36CX39B/CZ93, AND 32CX39B/CY93

CIRCUIT No.	Pin No.	DC Voltage
IY01	1	4.97
	2	4.7
	3	4.7
	4	4.7
	5	4.7
	6	4.7
	7	4.7
	8	4.7
	9	4.7
	10	4.7
	11	4.7
	12	2.5
	13	4.7
	14	4.7
	15	4.7
	16	4.7
	17	3.7
	18	2.6
	19	4.1
	20	4.9
	21	4
	22	4.8
	23	4.8
	24	4.8
	25	4.7
	26	4.8
	27	4.7
	28	4.8
	29	4.7
	30	4.7
	31	4.7
	32	4.7
	33	4.7
	34	0
	35	1
	36	4.7
	37	4.7
	38	4.8
	39	4.8
	40	4.8
	41	4.7
	42	4.8
	43	4.8
	44	9
	45	4.8
	46	4.7
	47	4.7
	48	4.7
IY02	1	0
	2	6.3
	3	0
	4	5
	5	0
	6	5
	7	0

CIRCUIT No.	Pin No.	DC Voltage
QI01	B	3.6
	C	8.2
	E	0
QI03	B	0
	C	0
	E	3.9
QI04	B	3.8
	C	8.7
	E	3.1
QI19	B	4.7
	C	0
	E	4.7
QI20	B	8.7
	C	3.5
QI21	B	3.6
	C	0.5
	E	3.2
QI22	B	8.7
	C	4.7
	E	9.3
QI23	B	3.7
	C	5.7
	E	3.1
QI31	B	3.6
	C	9.1
	E	4.3
QI34	B	5.6
	C	3.1
	E	4.9
QY06	B	4.7
	C	9.1
	E	4
QY20	B	3.1
	C	5.3
	E	2.5
QY50	B	2.8
	C	9.1
	E	3
QY51	B	4.7
	C	9.1
	E	4
QY52	B	4.7
	C	9.1
	E	4
QY53	B	4.6
	C	9.1
	E	4
QY54	B	3.5
	C	0.1
	E	3.2
QY55	B	4
	C	1.3
QY56	B	0.6
	C	0
	E	0



- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

SIGNAL SWITCH P.W.B.

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SELECTOR

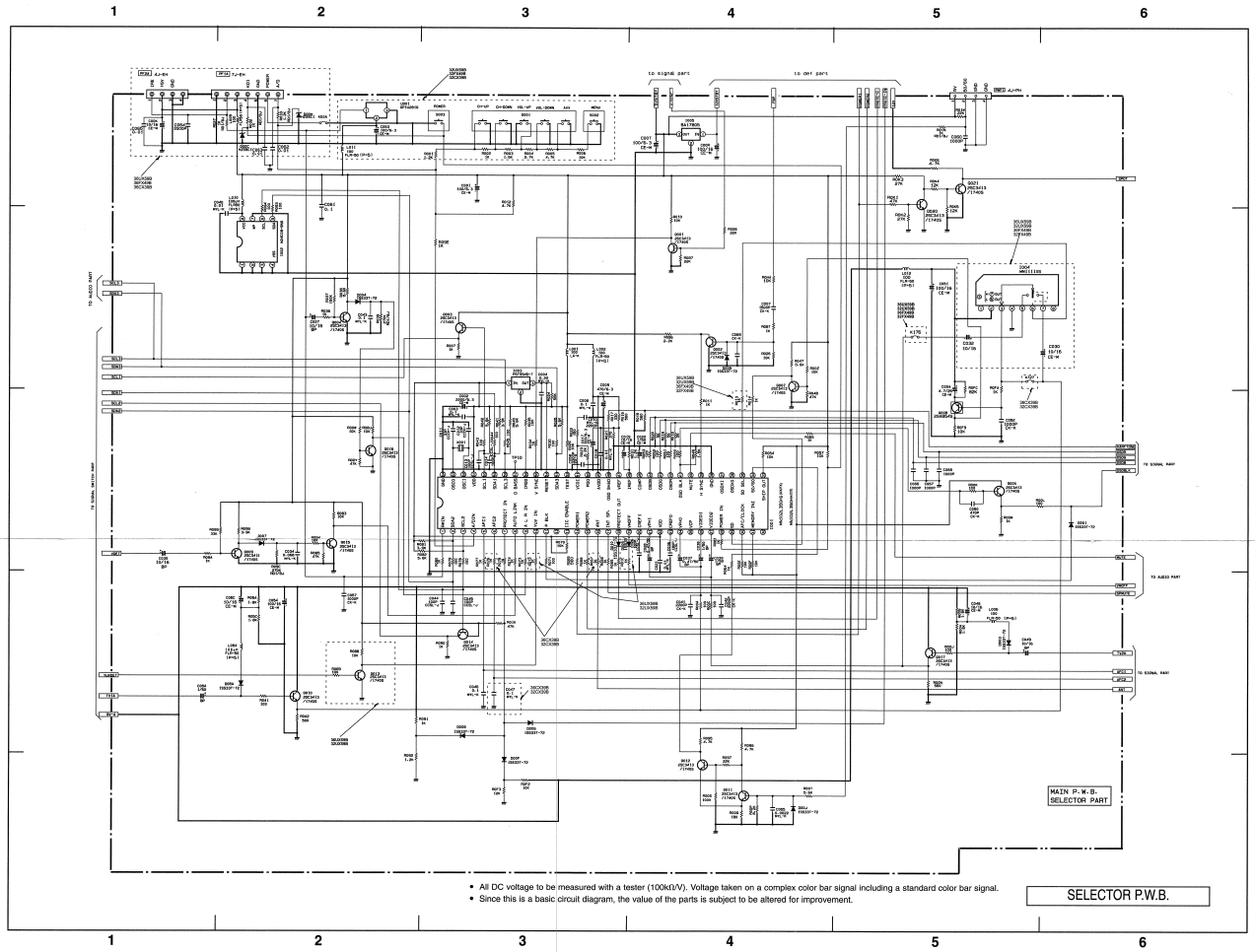
CIRCUIT SCHEMATIC DIAGRAM OF
36UX59B/CZ97, 32UX59B/CY97, 36FX49B/CZ95, 32FX49B/CY95, 36CX39B/CZ93, AND 32CX39B/CY93

PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

CIRCUIT No.	Pin No.	DC Voltage
I001	1	5
	2	4.8
	3	4.7
	4	0
	5	4.2
	6	2.2
	7	4.9
	8	0
	9	5
	10	5
	11	0
	12	0
	13	4.9
	14	4.6
	15	0
	16	4.9
	17	5
	18	5
	19	0
	20	3.4
	21	3.4
	22	4.9
	23	5
	24	3.3
	25	1.3
	26	2
	27	2.1
	28	4.9
	29	1.4
	30	4.9
	31	4.9
	32	0
	33	4.9
	34	2.9
	35	4.8
	36	4.9
	37	0
	38	0
	39	4
	40	0
	41	0
	42	0
	43	0
	44	0
	45	3.3
	46	1.8
	47	1.8
	48	0
	49	4.9
	50	1.2
	51	1.2
	52	4.9
	53	4.9
	54	4.9
	55	4.8
	56	4.9
	57	0
	58	4.2
	59	4.9
	60	4.8
	61	4.9
	62	2.2
	63	2.2
	64	0
I002	1	0
	2	0
	3	0
	4	0
	5	4.8
	6	4.7
	7	0
	8	0
I004	1	0
	3	6.3
	4	0
	5	5
	6	4.6
	7	5
	8	5
I005	1	12.2
	2	0
	3	5

CIRCUIT No.	Pin No.	DC Voltage
Q001	B	0
	C	4.8
	E	0
Q002	B	0.3
	C	4.1
	E	0
Q003	B	4.8
	C	5
	E	4.1
Q004	B	0.6
	C	0
	E	0
Q007	B	0
	C	4.4
	E	0
Q009	B	0.5
	C	1.3
	E	0
Q010	B	4.7
	C	3
	E	0
Q011	B	0.8
	C	3
	E	0.3
Q012	B	0.5
	C	2.3
	E	0.2
Q013	B	0
	C	5
	E	0
Q014	B	4.7
	C	2
	E	0
Q015	B	0.7
	C	0
	E	0
Q016	B	0
	C	5
	E	0
Q017	B	4.8
	C	0
	E	4.2
Q020	B	0.8
	C	0
	E	0
Q021	B	0
	C	12
	E	0
Q03A	B	0
	C	5
	E	0
Q03B	B	4.2
	C	0.3
	E	4.2

CIRCUIT No.	Pin No.	DC Voltage
U001	1	0
	2	5
	3	5



- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

SELECTOR P.W.B.

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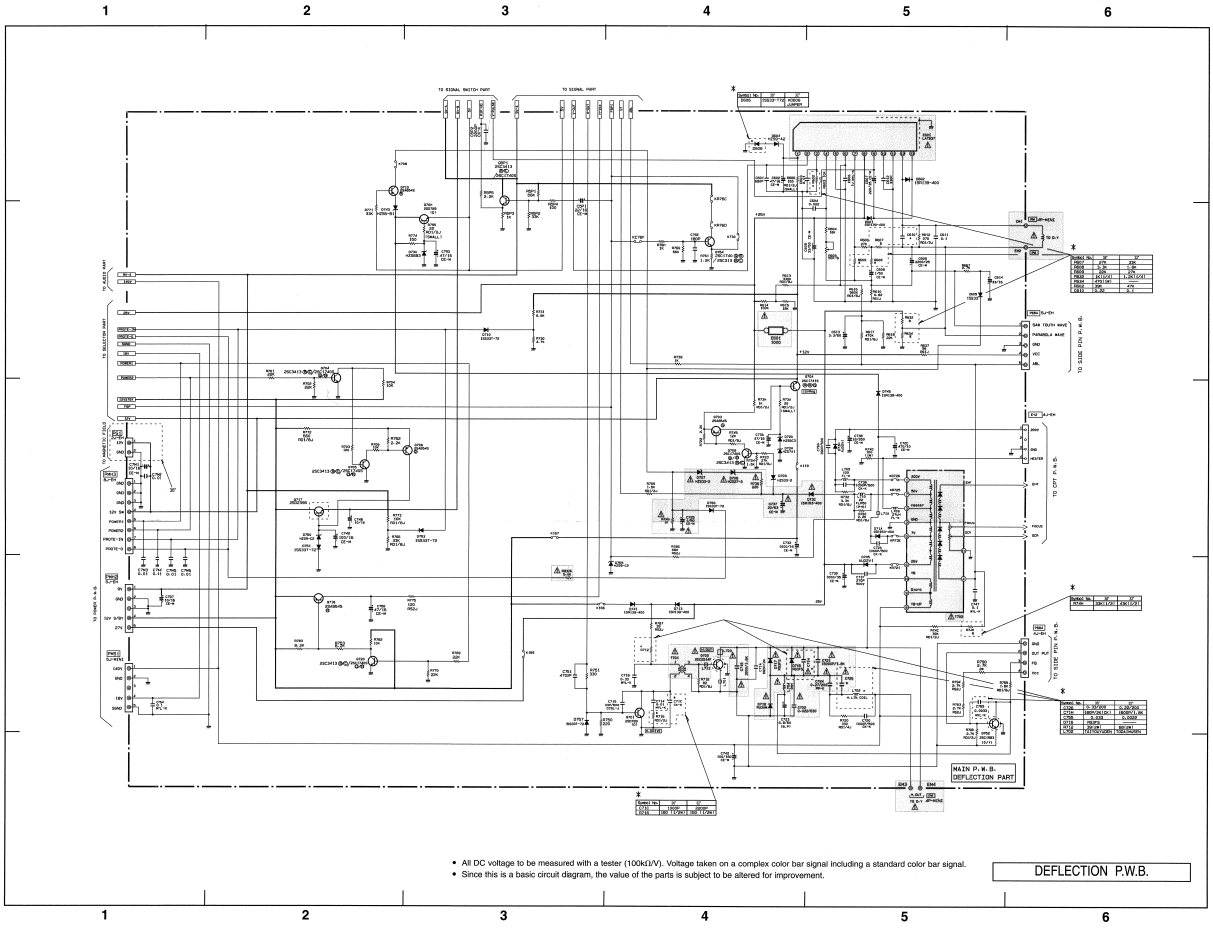
CIRCUIT SCHEMATIC DIAGRAM OF
36UX59B/CZ97, 32UX59B/CY97, 36FX49B/CZ95, 32FX49B/CY95, 36CX39B/CZ93, AND 32CX39B/CY93

CIRCUIT No.	Pin No.	DC Voltage
IC01	1	4.9
	2	4.9
	3	4.9
	4	4.9
	5	0
	6	4.8
	7	4.8
	8	27.3
	9	2.1
	10	1.4
	11	0
	12	14.5
	13	27.4

CIRCUIT No.	Pin No.	DC Voltage
Q701	B	0.3
	C	18.1
	E	0
Q702	B	0.7
	C	136.7
	E	0
Q703	B	12.8
	C	13.6
	E	12.9
Q704	B	0
	C	0.8
	E	0
Q705	B	0.7
	C	0
	E	0
Q706	B	8.3
	C	13
	E	8.9
Q708	B	0.9
	C	0
	E	0
Q710	B	5.2
	C	0
	E	4.8
Q717	B	8.4
	C	12.5
	E	7.8
Q718	B	11.35
	C	12.1
	E	10.8
Q720	B	0.7
	C	0.8
	E	0
Q722	B	0.3
	C	24.3
	E	0
Q754	B	0.9
	C	8
	E	1.6
Q755	B	12.9
	C	13.2
	E	12
Q759	B	0.7
	C	6.8
	E	6.2
QSP1	B	1.4
	C	F
	E	1.8



- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

DEFLECTION P.W.B.

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CIRCUIT SCHEMATIC DIAGRAM OF
36UX59B/CZ97, 32UX59B/CY97, 36FX49B/CZ95, 32FX49B/CY95, 36CX39B/CZ93, AND 32CX39B/CY93

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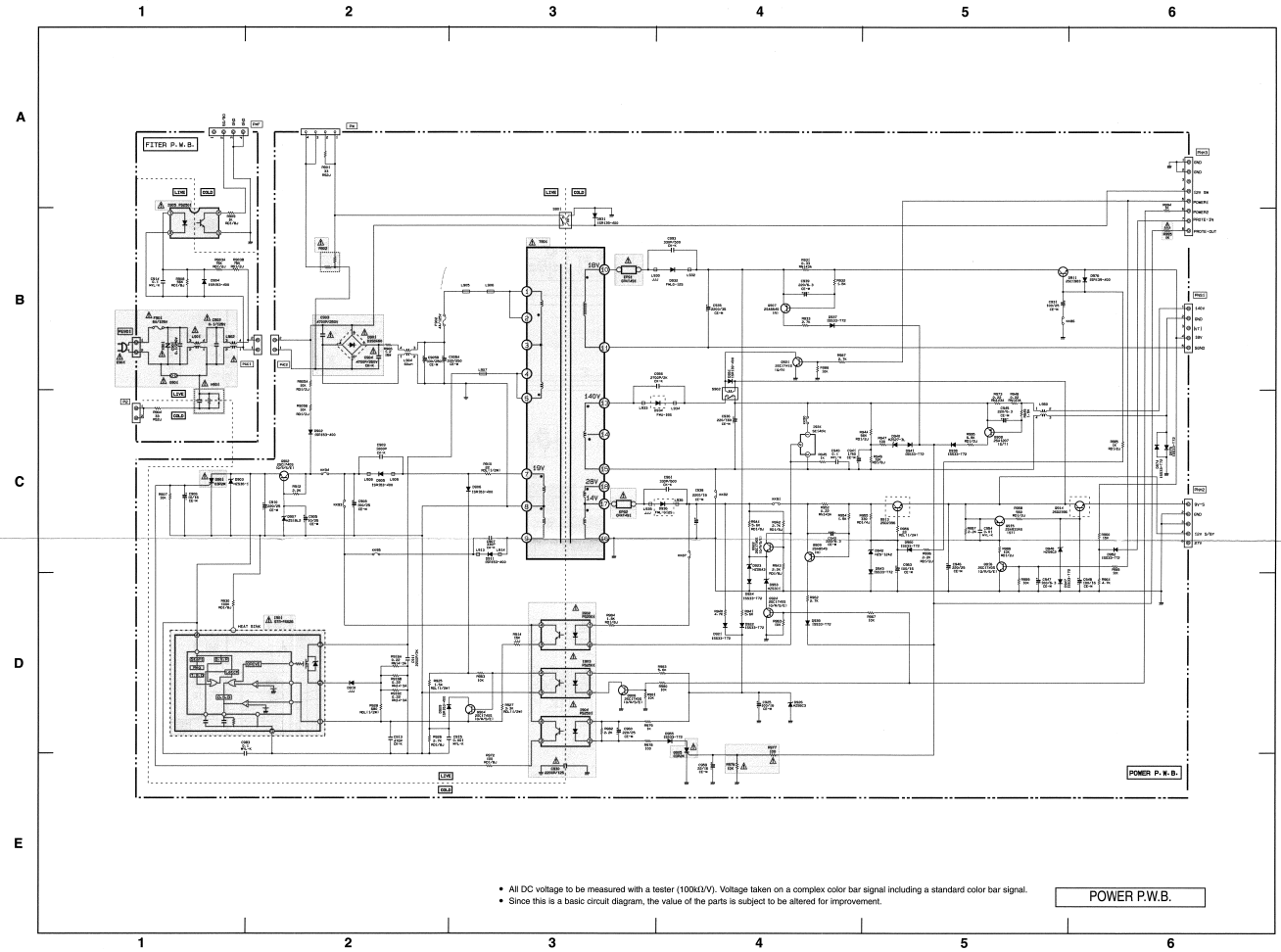

CIRCUIT No.	Pin No.	DC Voltage
I901	1	2.4
	2	0
	3	154.7
	4	0
	5	0
I902	1	19
	2	12
	3	9.6
	4	18.7
I903	1	6.1
	2	5.3
	3	0
	4	2.6
I904	1	6.1
	2	6.1
	3	0
	4	18.7
I905	1	57.3
	2	0
	3	0
	4	1.1
I931	1	140.7
	2	12
	3	0

CIRCUIT No.	Pin No.	DC Voltage
Q901	K	0
	A	16.9
	G	0
Q902	B	12.5
	C	18.1
	E	16.9
Q904	B	2.8
	C	2.3
	E	2.4
Q905	A	4
	K	0
	G	0
Q906	B	0
	C	0.6
	E	0
Q907	B	2.2
	C	0.5
	E	19.2
Q908	B	140.6
	C	140.7
	E	141.1
Q909	B	13.5
	C	0.5
	E	13.5
Q911	B	19.3
	C	19.2
	E	19.3
Q913	B	12.3
	C	13.3
	E	12.3
Q914	B	8.9
	C	12.3
	E	8.2
Q915	B	11.6
	C	12.3
	E	12.3
Q916	B	0.9
	C	0
	E	0
Q921	B	0.7
	C	0
	E	0
Q922	B	8.2
	C	13
	E	8
Q924	B	0
	C	6.1
	E	0

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

POWER P.W.B.

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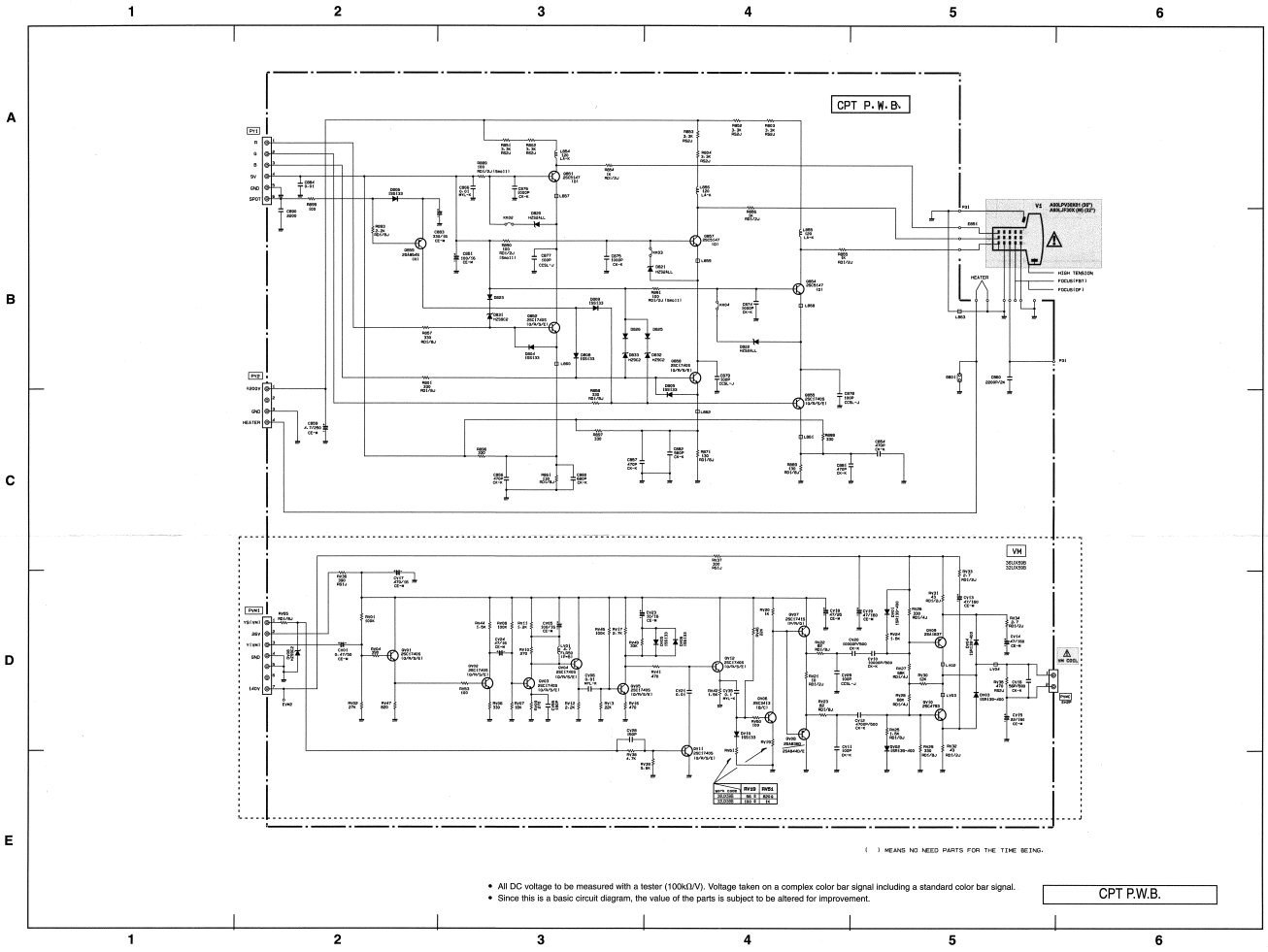
CIRCUIT SCHEMATIC DIAGRAM OF
36UX59B/CZ97, 32UX59B/CY97, 36FX49B/CZ95, 32FX49B/CY95, 36CX39B/CZ93, AND 32CX39B/CY93

CIRCUIT No.	Pin No.	DC Voltage
Q851	B	6.3
	C	100.3
	E	6.4
Q852	B	6.4
	C	6.4
	E	5.1
Q854	B	6.3
	C	100.3
	E	6.4
Q855	B	6.5
	C	6.4
	E	5.1
Q857	B	6.3
	C	100.3
	E	6.4
Q858	B	6.5
	C	6.2
	E	5.2
Q859	B	12
	C	12
	E	11.3

CIRCUIT No.	Pin No.	DC Voltage
QV01	B	5
	C	14.9
	E	2.4
QV02	B	2.4
	C	7.2
	E	1.7
QV03	B	5.1
	C	8.5
	E	1.4
QV04	B	8.5
	C	14.9
	E	7.8
QV05	B	2.5
	C	4.6
	E	1.8
QV06	B	5
	C	8.1
	E	5.4
QV07	B	8.1
	C	14.9
	E	7.8
QV08	B	8.1
	C	0
	E	0
QV09	B	138.8
	C	66
	E	139
QV10	B	0.2
	C	69.8
	E	0.1
QV11	B	0
	C	0
	E	0
QV12	B	4.8
	C	14.9
	E	4



- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

CPT P.W.B.

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CIRCUIT SCHEMATIC DIAGRAM OF
36UX59B/CZ97, 32UX59B/CY97, 36FX49B/CZ95, 32FX49B/CY95, 36CX39B/CZ93, AND 32CX39B/CY93

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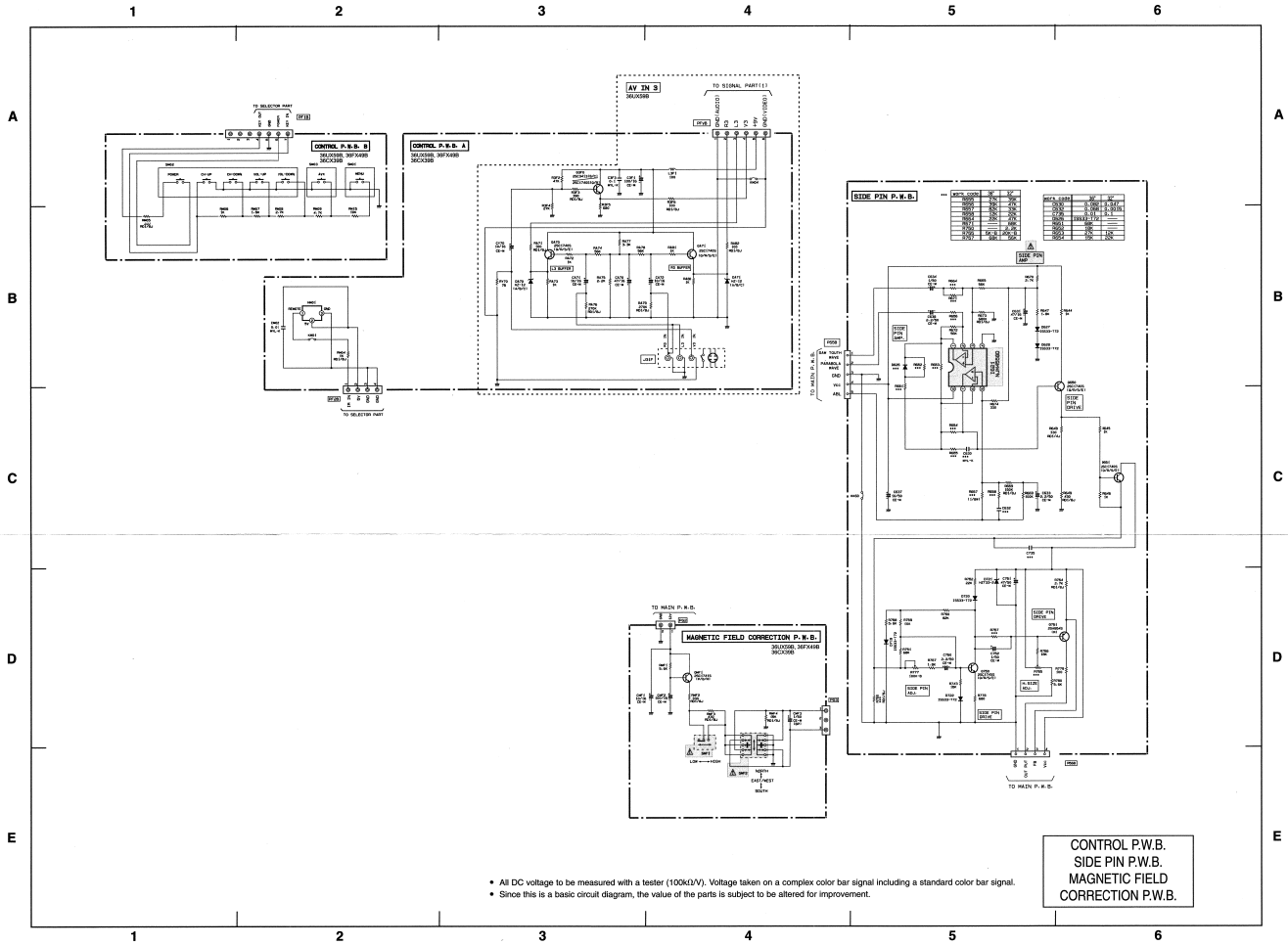

CIRCUIT No.	Pin No.	DC Voltage
M21	1	4.9
	2	4.9
	3	4.9
	4	0
	5	5.3
	6	5.3
	7	5.7
	8	11.4

CIRCUIT No.	Pin No.	DC Voltage
HM01	1	5
	2	5
	3	0

CIRCUIT No.	Pin No.	DC Voltage
Q650	B	5.7
	C	5.5
	E	5
Q651	B	4.9
	C	33.8
	E	4.9
Q750	B	1.3
	C	33.8
	E	4.0
Q751	B	27.8
	C	0.3
	E	28.4
QA70	B	0
	C	0
	E	0
QA71	B	0
	C	0
	E	0
QSP0	B	0
	C	0
	E	0
QMF1	B	11.9
	C	11.9
	E	11.5

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

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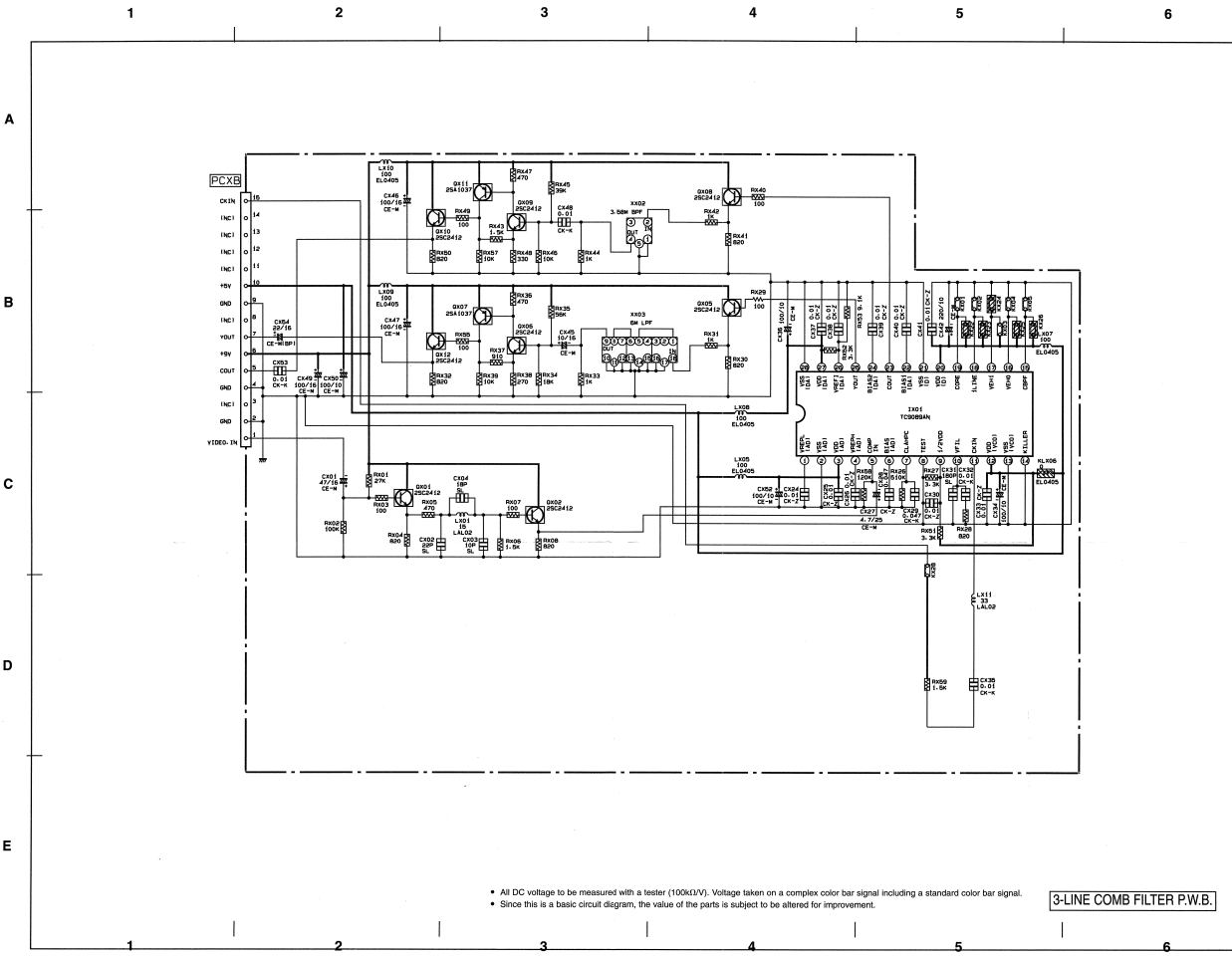
CIRCUIT SCHEMATIC DIAGRAM OF
36UX59B/CZ97, 32UX59B/CY97

CIRCUIT No.	Pin No.	DC Voltage
IX01	1	1.0
	2	0
	3	4.9
	4	3
	5	2
	6	1
	7	3
	8	4.9
	9	0
	10	2.5
	11	1.5
	12	2
	13	0
	14	0
	15	0
	16	0
	17	4.9
	18	4.9
	19	0
	20	4.9
	21	0
	22	0
	23	4
	24	1.5
	25	4
	26	3.5
	27	4.9
	28	0
IX02	1	9
	2	1
	3	2
	4	3
	5	0
	6	0
	7	0
	8	0
	9	0
	10	4.9
	11	4.9
	12	1.3
	13	2
	14	3
	15	0.5
	16	2.5

CIRCUIT No.	Pin No.	DC Voltage
QX01	B	0
	C	0
	E	0.3
QX02	B	4
	C	9
	E	3.3
QX04	B	0
	C	9
	E	4
QX05	B	4
	C	9
	E	3.3
QX06	B	2
	C	9
	E	1.9
QX07	B	0
	C	9
	E	0
QX08	B	4
	C	9
	E	3.5
QX09	B	2
	C	9
	E	1
QX10	B	4.5
	C	9
	E	4
QX11	B	0
	C	4.5
	E	0
QX12	B	5
	C	9
	E	4



- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

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CIRCUIT SCHEMATIC DIAGRAM OF
36FX49B/CZ95, 32FX49B/CY95, 36CX39B/CZ93 and 32CX39B/CY93

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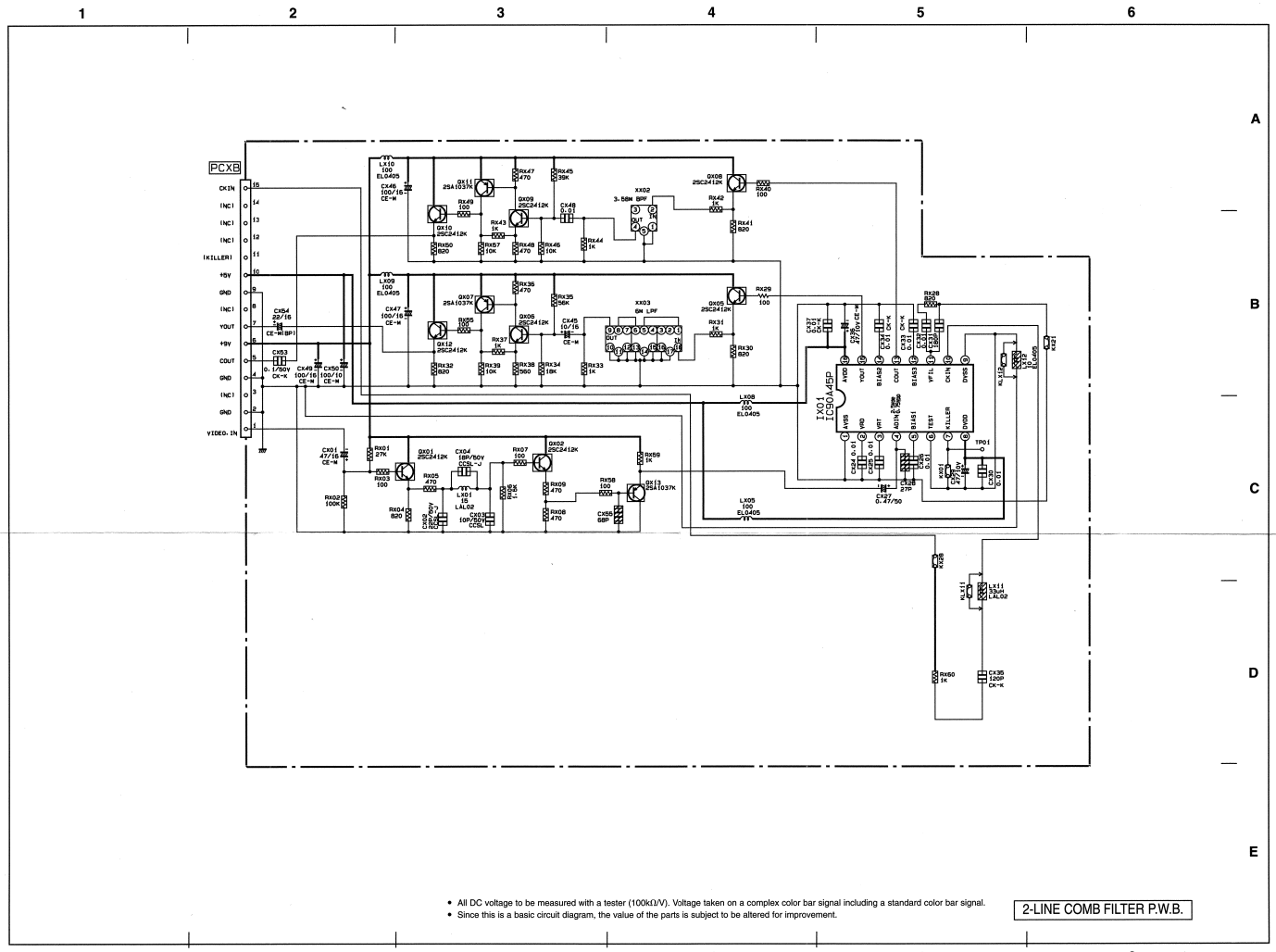

- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

2-LINE COMB FILTER P.W.B.

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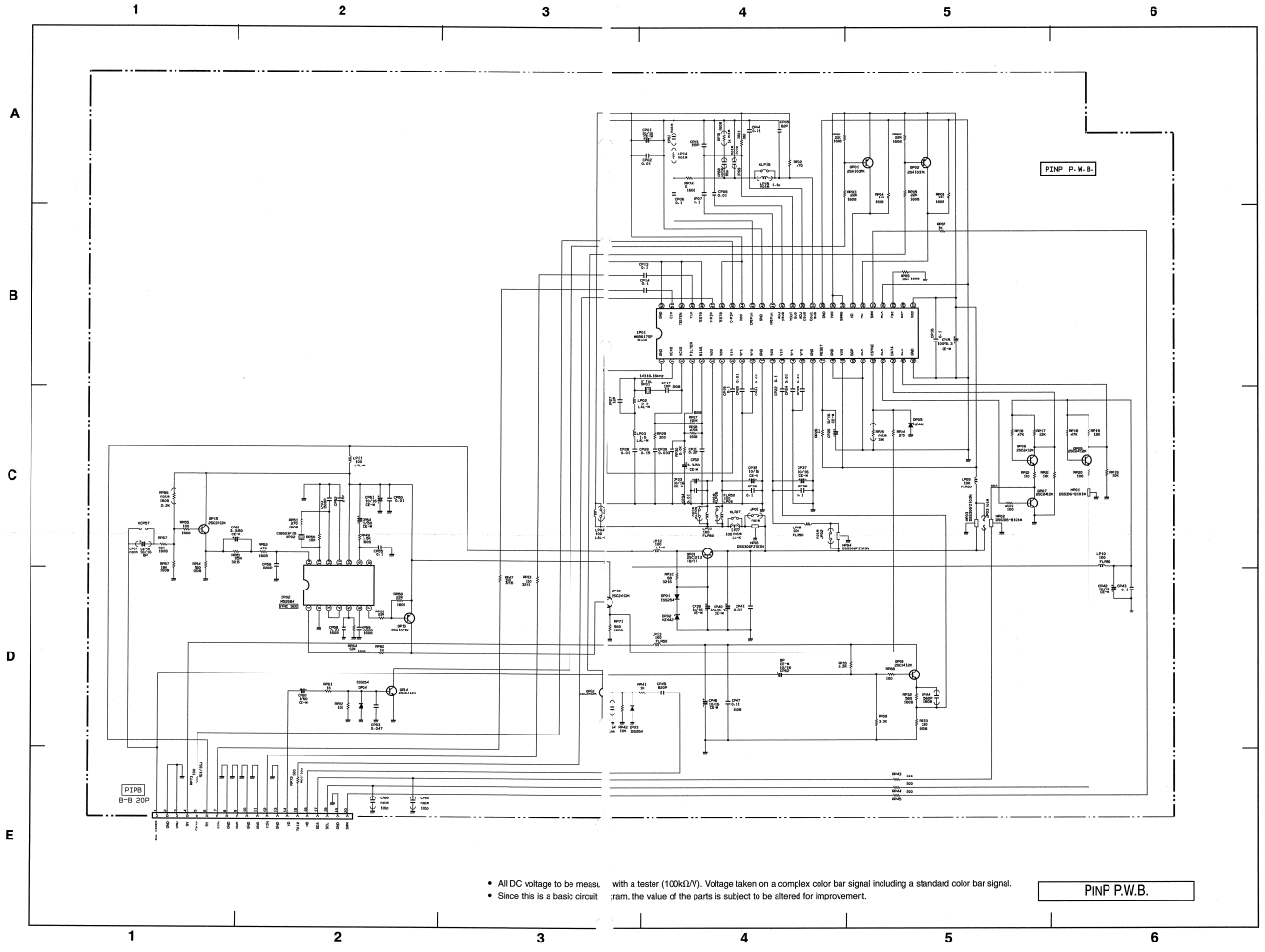
CIRCUIT SCHEMATIC DIAGRAM OF
36UX59B/CZ97, 32UX59 CY97, 36FX49B/CZ95, 32FX49B/CY95, 36CX39B/CZ93 and 32CX39B/CY93

CIRCUIT No.	Pin No.	DC Voltage
IP01	1	0
	2	1.5
	3	1.5
	4	1.5
	5	3.5
	6	3.5
	7	3.3
	8	0
	9	1.5
	10	5.0
	11	0
	12	3.0
	13	1
	14	1.5
	15	0.5
	16	0
	17	3.5
	18	0
	19	9.5
	20	0
	21	0
	22	0.5
	23	0
	24	3
	25	3
	26	0
	27	3.5
	28	3.5
	29	0
	30	0
	31	0
	32	0.5
	33	0
	34	3
	35	3
	36	0
	37	3
	38	1
	39	0.2
	40	1.5
	41	0.5
	42	0
	43	1
	44	3
	45	1
	46	3
	47	1
	48	0
	49	1
	50	0
	51	1
	52	0
IP02	1	1
	2	0
	3	1
	4	1
	5	1
	6	0.5
	7	3.5
	8	3.5
	9	2.5
	10	4.5
	11	2
	12	2
	13	1
	14	2.5

CIRCUIT No.	Pin No.	DC Voltage
QP01	B	0
	C	0
	E	0
QP02	B	0.6
	C	0
	E	0
QP05	B	3.3
	C	3
	E	2.7
QP06	B	3.5
	C	3
	E	2.7
QP07	B	0
	C	4
	E	0
QP08	B	4.6
	C	5.0
	E	0
QP09	B	1.5
	C	3
	E	0
QP12	B	0
	C	3
	E	0
QP13	B	1
	C	1
	E	4.5
QP14	B	0
	C	3
	E	0
QP15	B	1.5
	C	4
	E	1
QP16	B	1
	C	4.5
	E	0.6



- All DC voltage to be measu with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.
- Since this is a basic circuit gram, the value of the parts is subject to be altered for improvement.

PInP P.W.B.

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